

A I R F O R C E P A M P H L E T

HISTORICAL DATA

**A CHRONOLOGY
OF AMERICAN
AEROSPACE EVENTS**

D E P A R T M E N T O F T H E A I R F O R C E

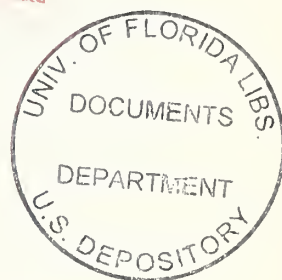
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A I R F O R C E P A M P H L E T

FLARE

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A CHRONOLOGY OF AMERICAN AEROSPACE EVENTS



1 JULY 1959

D E P A R T M E N T O F T H E A I R F O R C E



AIR FORCE PAMPHLET
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DEPARTMENT OF THE AIR FORCE
Washington, 1 July 1959

Foreword

This Chronology of American Aviation was prepared by the Office of Information Services, SAFS. It undertakes to list all significant American aviation events and includes many other events in the Nation's air progress.

This pamphlet is published for Air Force use in connection with anniversaries, celebrations, and other special occasions related to historic aviation events. It also provides useful references for speeches and for articles in base newspapers and similar publications.

Future events will be included in the pamphlet by means of page changes to the pamphlet.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

OFFICIAL:

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PART ONE

CHRONOLOGY OF AMERICAN AEROSPACE EVENTS, FROM 1903, BY YEAR

1903

December

- 8—The second and last trial of the Langley airplane. The machine piloted by Charles M. Manly, was wrecked in launching from a houseboat on the Potomac River.
- 14—The world's first power airplane flight was made off Kill Devil Hill, Kitty Hawk, N. C., by Wilbur Wright—105 feet in 3.5 seconds. (Because the plane crashed so soon after take-off, the flight is not considered either as sustained or controlled as are the flights of 17 December.)
- 17—First sustained controlled power airplane flights were made by Orville and Wilbur Wright at Kitty Hawk, N. C. On the fourth and longest flight of the day the plane flew 852 feet in 59 seconds.

March

- 23—First Wright airplane patent, based on their 1902 glider, filed in America, but not issued until 22 May 1906.

August

- 8—The Langley gasoline engine model plane was successfully launched from a catapult on a houseboat.

1904

August

- 3—Circuit flight in airship with Curtiss motor was made by Captain Thomas S. Baldwin at Oakland, Calif.

1905

January

- 18—The Wright Brothers opened negotiations with U. S. Government to build an airplane.

April

- 29—Daniel Maloney began a series of glides with the Montgomery Glider, taking off from captive balloons.

October

- 5—Orville Wright flew 24.2 miles in 38 minutes 3 seconds at Dayton, Ohio, establishing a world distance and duration record.

November

- 30—During this month (no precise date available) the Aero Club of America was founded by men who had earlier organized the Automobile Club of America.

1906

January

- 13—The first exhibition of the Aero Club of America opened in New York in connection with the automobile show.

August

- 11—Mrs. C. J. S. Miller became the first woman in the U. S. to fly in an airship

balloon as a passenger. The 40-horsepower, 22,500-cubic foot airship was owned by her husband, Major Miller of Franklin, Pa.

September

- 30—The first Gordon Bennett balloon race was won by Lt. Frank P. Lahm and Major H. B. Hersey. Taking off from Paris, France, they landed at Scarborough, England, a flight of 647.98 kilometers.

1907

March

- 16—The Wright Brothers' project for an Army airplane was renewed by Cortlandt F. Bishop, president of Aero Club of America, through President Theodore Roosevelt. This led to the first airplane contract between the Army and Wright Brothers.

June

- 4—Cpl. Edward Ward, the first non-commissioned officer in the Army's newly-created balloon organization (which later became the Aeronautical Division of the Signal Corps) was detailed for instruction in balloon manufacture.
- 8—The first aeronautical exhibit building was dedicated at the Jamestown Exposition, Jamestown, Va.

August

- 1—The Aeronautical Division was established in the Office of the Chief Signal Officer of the Army. The division, under Capt. Charles DeF. Chandler, was to have charge of all matters pertaining to military ballooning, air machines and kindred subjects.

October

- 1—The Aerial Experiment Association was formed at Beinn Breagh near Baddeck,

Nova Scotia, the summer home of Dr. Alexander Graham Bell, at the suggestion of Mrs. Bell. It was composed of Dr. Bell, F. W. Baldwin, J. A. D. McCurdy, Glenn H. Curtiss, and Lt. Thomas E. Selfridge.

- 17—Captain Charles DeF. Chandler and J. C. McCoy in Signal Corps Balloon No. 10 became the first winners of the Lahm Cup. Their flight began in St. Louis, Mo., and ended at Walton, W. Va., a distance of 473.56 miles in 20 hours 15 minutes.

- 28—The International Aeronautical Congress was held at the Automobile Club, New York.

November

- 7—The Board of Ordnance and Fortification allotted \$25,000 to the Signal Corps for the procurement of an airship.
- 30—The first airplane company in the United States was formed during the month—the Curtiss Motor Vehicle Company.

December

- 5—Wilbur Wright appeared before the Board of Ordnance and Fortification and offered, for \$25,000, the U. S. Government an airplane capable of carrying two people. The Board recommended that the Signal Corps submit to it specifications for an airplane.
- 6—Alexander Graham Bell's kite, Cygnet I, flown by Lt. Thomas E. Selfridge, and towed by a motor boat tug, stayed aloft for 7 minutes over Bras d'Or Lake, Nova Scotia.
- 16—Chief Signal Officer called for bids on lighter-than-air "airship."
- 23—Bids on heavier-than-air "flying machine" were called for by Chief Signal Officer.

1908

January

- 28—Lt. Frank P. Lahm, Henry W. Alden, and J. G. Obermeier made a balloon

trip in the *Ohio* from Canton, Ohio, to Oil City, Pa., about 100 miles in 2 hours 20 minutes.

February

- 6—Bids for the Army's first airplane were considered by Board of Ordnance and Fortification which recommended acceptance of bids by J. F. Scott, A. M. Herring, and Wright Brothers. All three bids were approved on 8 February by the Secretary of War.
- 10—The first Army airplane contract with the Wright Brothers was signed by Captain Charles S. Wallace for the Signal Corps. Herring and Scott were also awarded contracts but failed to produce planes.
- 15—Bids were received for the Government airship under the revised specifications; the contract was awarded to Captain Thomas S. Baldwin on 24 February.

March

- 12—The *Red Wing*, first of the Aerial Experiment Association's planes, made its initial flight at Lake Keuka, Hammondsport, N. Y. The plane, whose design is credited to Lt. Thomas Selfridge, was flown by F. W. Baldwin.

April

- 11—Lt. Frank P. Lahm was placed in charge of the Aeronautical Division, Office of the Chief Signal Officer.
- 22—Captain Charles DeF. Chandler, accompanied by Theodore Roosevelt, Jr., son of the President, and Captain Fitzhugh Lee, military aide to the President, made a balloon ascent which lasted 4 hours 30 minutes. They landed at Delaware City.

May

- 6—(6-14 May) The Wrights renewed their flights at Kitty Hawk. These were witnessed by reporters, ending all doubt that the Wrights had built an airplane that could fly.

- 13—First balloon radio reception in the U. S. was received during a flight from Ft. Myer, Va., to Woodwardville, Md.
- 14—The first passenger flight in history took place in the Wright plane at Kitty Hawk in preparation for delivery of a Government airplane; Wilbur Wright piloted the machine and Charles Furnas, an employee, was the first passenger.
- 19—Lt. Thomas E. Selfridge, U. S. Army, first soldier to fly a heavier-than-air machine, piloted the airplane *White Wing* (second of Dr. Alexander Graham Bell's Aerial Experiment Association planes) at Hammondsport, N. Y. This airplane was equipped with hinged ailerons.
- 22—The three-man airship of Roy Knabenshue made its first ascent at Toledo, Ohio, with the owner, Charles K. Hamilton, and George Duesler aboard.
- 31—Glenn H. Curtiss Manufacturing Company at Hammondsport, N. Y., announced that it was equipped to accept orders for and deliver flying machines in 60 days at \$5,000 per plane.

June

- 7—The first aviation column in an American newspaper began in the Sunday editions of the *Philadelphia Inquirer* by John Trevor Custis, managing editor.
- 10—The Aeronautical Society, first of its kind, was formed in New York. Morris Park airfield was later obtained for the use of the club.
- 21—The *June Bug*, third plane of Dr. Bell's Aerial Experiment Association, was flown by Glenn H. Curtiss, the designer.

July

- 4—The first American air trophy offered by the *Scientific American* for the first official flight of 1 kilometer was won by Glenn H. Curtiss at Hammondsport, N. Y., in the *June Bug*, in 1 minute 42.5 seconds. The trial was the first "official" test of an airplane ever made in America, timed and measured by a rep-

1909

representative of the F.A.I. (Federation Aeronatique Internationale).

- 6—An Aeronautical Board of the Signal Corps was appointed for "conducting tests of dirigibles, balloons, and airplanes under existing contracts."
- 17—The world's first aviation legislation (municipal ordinance regulating aircraft within the city limits) was enacted at Kissimmee, Fla.
- 23—The Army's first airship and hydrogen plant were delivered by Thomas S. Baldwin at Fort Myer, Va.
- 31—Henry Farman made his first exhibition flights in the U. S. in his Farman plane.

August

- 4—The first test ascent (lasting some 7 minutes) was made in Signal Corps Airship No. 1 at Ft. Myer, Va., with Thomas S. Baldwin at the controls and Glenn H. Curtiss as engineer.
- 12—Lts. Lahm, Foulois, and Selfridge began official airship flights at Fort Myer, Va. The airship was accepted on 22 August, and was named Army Dirigible No. 1.

September

- 3—First test flight of Army flying machine made at Ft. Myer, Va., by Orville Wright.
- 9—Orville Wright broke all duration record when he flew for 57 minutes and 25 seconds, making 57 circuits of the field at Ft. Myer, Va., at over 100 feet altitude.
- 9—Lt. Frank P. Lahm became the first Army passenger carried in the "Wright Flyer" during the trials at Ft. Myer, Va.
- 17—Lt. Thomas E. Selfridge, the first Army officer to be killed in an airplane flight, met his death during a trial flight of the Wright Flying Machine at Ft. Myer, Va. This was the world's first fatal airplane accident.

November

- 3—The Aeronautic Society held its first ex-

hibition and tournament at its airfield at Morris Park race track, Bronx, N. Y.

- 5—At a dinner in his honor in France, Wilbur Wright received the Grand Gold Medal of the Aero Club of France, a medal from the Academy of Sports, and 5,000 francs, which he had won on 30 September 1908 in an air show.
- 28—First trials of the seaplane *Loon*, on Lake Keuka, Hammondsport, N. Y., by J. A. D. McCurdy. This was the first attempt at a water takeoff in America; although the plane did not lift into the air, it ran on the water at 72 mph.

December

- 18—Wilbur Wright won the Aero Club de la Sarthe 100-meter height prize by an official flight to a height of 110 meters. He also established a world's duration distance record of 99.8 kilometers in 1 hour 54 minutes 53.4 seconds.
- 31—Wilbur Wright flew 124.7 kilometers (77 miles) in 2 hours 20 minutes 23.2 seconds to establish a world duration-distance record at LeMans, France, winning the Michelin Trophy and \$4,000.

1909

January

- 12—The Wright Brothers sold their patent rights to the General Aerial Navigation Company of France, represented by Lazare Weiller, for \$100,000 and an interest in the company.
- 22—The Aeronautic Society of New York awarded a contract for \$5,000 to Glenn Curtiss; this was the first airplane built for sale by Curtiss.
- 31—The New York *World* announced its \$10,000 prize for a flight from any point in Greater New York to within 10 miles of the Capital at Albany during the Hudson-Fulton celebration in the fall.

February

- 23—J. A. D. McCurdy made the first airplane flight in Canada when he flew the Aerial

Experiment Association's plane, the Silver Dart, over Baddeck Bay, Nova Scotia.

March

- 4—President Taft approved a joint resolution of Congress awarding Congressional Gold Medals to the Wright Brothers.
- 20—The Herring-Curtiss Company was formed to build airplanes. Capital stock was \$360,000.
- 27—An agreement was entered into whereby the Aero Club of America became the Aviation Section of the Automobile Club of America.
- 31—During the month, Amherst College put its name in 35-foot high white letters, this being the first air marking on record.

May

- 12—Dr. R. M. Randall in Greylock won the second contest for the Forbes Trophy in a point-to-point balloon race from North Adams to Leeds, Mass.

June

- 5—The first National Balloon Race was won by John Berry and Paul McCullough; Indianapolis to Fort Payne, Ala., a distance of 377.9 miles in 25 hours 35 minutes.
- 10—President Taft presented Aero Club of America medals to the Wrights at the White House.
- 17—Special Congressional medals were presented to Orville and Wilbur Wright.
- 22—The first airplane sales agency in America was established by Wykoff, Church, and Partridge, New York automobile sales concern.
- 26—Glenn H. Curtiss' first exhibition flights at the Aeronautic Society's meet at its Morris Park aerodrome in the first Curtiss airplane were the first airplane flights over New York City.
- 27—Three New York newspapers—the *Sun*, *Times*, and *Herald*—printed the first

advertisements in the world of a practical airplane for sale.

- 29—Trial flights of the new Army airplane, with Orville Wright at the controls, began at Ft. Myer, Va.

July

- 25—Louis Bleriot, of France, became the first person to fly across the English Channel. He started at Les Barrages, France, and landed at Dover, England.
- 27—Orvil Wright, with Lt. Frank P. Lahm as passenger, made a new two-man endurance record of 1 hour 12 minutes 40 seconds, fulfilling the conditions on one hour's flight with a passenger in the first official test flight of the Army's first airplane.
- 30—The second test of the Army Wright plane was completed; a 10-mile cross-country flight over a stipulated course from Ft. Myer, Va., to Alexandria, Va., and back, at a speed of 42.583 miles per hour for which the Wrights received a bonus of \$5,000 (10 percent of the base price of \$25,000 for each mile over 40), making the purchase price \$30,000. The plane was formally accepted on 2 August 1909.

August

- 22—Between 22 and 29 August, at the first International Flying Meet, held at Rheims, France, Glenn H. Curtiss, flying one of his own Curtiss planes, won two first prizes (\$5,000 and \$2,000) and one second prize (\$600) in the speed competitions. Top speed was 45.7 mph.
- 28—After instruction by Glenn Curtiss, Charles F. Willard, America's first exhibition pilot, gave his first exhibition at Scarsborough Beach, Toronto.

October

- 4—Wilbur Wright flew from Governor's Island (off the southern end of Manhattan Island) out past the Statue of Liberty, up the Hudson to a turn opposite Grant's Tomb, and back to Governor's Island

during New York's Hudson-Fulton celebration.

- 7—Glenn H. Curtiss became the first American to hold an F.A.I. airplane certificate; he was given Aero Club of France Certificate No. 2.
- 23—Lt. Benjamin D. Foulois took his first flying lesson from Wilbur Wright at College Park, Md.
- 26—Lt. Frank E. Humphreys became the first Army officer to solo in the Army's first airplane, at College Park, Md.
- 27—First woman airplane passenger in the U. S.—Mrs. Ralph H. Van Deman—made a four-minute flight at College Park, Md., with Wilbur Wright at the controls.

November

- 3—Lt. George C. Sweet, USN, was taken as a passenger in the first Army Wright airplane, thus becoming the first Navy Officer to fly in an airplane.
- 4—The first sportsman airplane owner in the United States, A. P. Warner of the Warner Instrument Company, began instructing himself to fly a Curtiss airplane.
- 6—Wilbur and Orville Wright received the Legion of Honor Cross from the French Government at its consulate in New York.
- 12—Wanamaker's Department Store, Philadelphia, advertised "flying machines for sale." The advertisement was in connection with the exhibit of the "Bleriot" plane (an exact duplicate of the one that flew the English Channel) which was offered for \$5,000.
- 22—The Wright Company was incorporated with a capital stock of \$1,000,000 to manufacture flying machines.

1910

January

- 10—The first American flying meet opened at Los Angeles, under the auspices of the Aero Club of California.

12—Louis Paulhan set a new solo world altitude record of 4,165 feet at the Los Angeles Flying Meet.

19—Lt. Paul W. Beck, flying with Louis Paulhan in his Farman at the Los Angeles Meet, dropped three 2-pound sandbags, simulating bombs, in an effort to hit a target. This was the first such experiment by an Army officer.

February

10—The Board of Regents of the Smithsonian Institution awarded the first Langley Medal to the Wright Brothers at Washington, D. C., "for advancing the science of aerodynamics in its application to aviation by their successful demonstrations of the practicability of mechanical flight by man."

March

- 2—Lt. Benjamin D. Foulois began solo flying at Fort Sam Houston, San Antonio, Texas.
- 19—Orville Wright opened the first Wright Flying School at Montgomery, Alabama, on the site which later became Maxwell Field.

April

18—Night flights were made by Walter Brookins, Wright pilot, at Montgomery, Ala.

May

- 5—A world altitude record for kites of 23,800 feet was set at Mt. Weather (Va.) Observatory; the kite broke its own earlier record.
- 25—Orville and Wilbur Wright flew together for the first time at Dayton, Ohio.
- 29—Glenn H. Curtiss made a record flight of 142.5 miles from Albany to New York in 2 hours 50 minutes, winning the American Scientific Trophy for the third time, giving him permanent possession.

June

- 13—Between 13-18 June the Indianapolis Air Meet was held at the Speedway, at which the Wright Exhibition Team flew for the first time.
- 13—Charles K. Hamilton flew from New York to Philadelphia and returned to win the New York *Times* prize of \$10,000 (149.5 miles in flying time of 3 hours 27 minutes).

July

- 9—First Aviator to fly to height of one mile—Walter Brookins—attained altitude of 6,175 feet in Wright biplane at Atlantic City, N. J., winning the Atlantic City Aero Club prize of \$5,000.
- 21—Experimental flights were made at Dayton by Orville Wright with a wheeled chassis comprising a set of twin wheels attached to each skid.

August

- 4—Elmo N. Pickerill claimed to have made first plane-to-ground-to-plane radio-telegraphic communication in America, during a solo flight in a Curtiss pusher from Mineola, Long Island, to Manhattan Beach and return.
- 8—The first tricycle landing gear, built by civilian mechanic Oliver G. Simmons and Corporal Madole, was installed on the Army Wright plane in place of the original skids.
- 19—Between 19 and 28 August, New Yorkers saw the first real flying exhibition. It was put on by Glenn Curtiss at Sheepshead Bay Track, N. Y.
- 20—U. S. Army Springfield .30 caliber rifle was fired from an airplane by Lt. Jacob E. Fickel with Glenn H. Curtiss at Sheepshead Bay, N. Y.
- 31—Glenn Curtiss flew across Lake Erie between Euclid Beach and Cedar Point, 64.75 miles in 1 hour 18 minutes to win \$5,000 prize of Cleveland *Press*.

September

- 2—The first American woman pilot, Blanche

Scott, soloed over the Keuka Lake front field of the Curtiss Company, Hammondsport, N. Y., but did not receive an FAI certificate.

October

- 11—Former President Theodore Roosevelt became the first President to fly. He was a passenger in a flight at St. Louis.
- 22—Beginning of Belmont Park International, the largest aerial meet held in America prior to World War I.
- 31—Ralph Johnstone in his Wright machine set a new world altitude record of 9,714 feet at the Belmont Park International Meet.

November

- 14—First takeoff from a Navy ship made by Eugene Ely from a platform built on the deck of the USS *Birmingham* anchored in Hampton Roads, Va.

1911

January

- 15—At the San Francisco Air Meet (Tannan Race Track) Lt. Myron S. Crissy, flying with P. O. Parmalee, dropped a live bomb designed by himself over the side of the Wright airplane on a target below.
- 16—Lt. G. E. M. Kelly, Infantry, flew with Walter Brookins in a Wright plane at 2,000 feet through the San Bruno Hills, Calif., in the first photo reconnaissance flight to locate troops (who were not discovered because they were in small groups in a wooded area).
- 18—During the San Francisco Meet, Eugene Ely, Curtiss exhibition pilot, landed on the afterdeck of the anchored battleship *Pennsylvania* and took off from it in his Curtiss pusher.
- 21—Lt. Paul W. Beck made the Army's first radio-telegraphic transmission from an airplane. The demonstration was on a transmitter of his own design, in

Parmalee's Wright plane, at an altitude of 100 feet, to a station at Selfridge Field, Mich., 1-1/2 miles away.

- 21—The Curtiss North Island School and Experimental Station opened at San Diego. This later became the Signal Corps Aviation School.
- 26—Glenn H. Curtiss flew a seaplane from the water at San Diego, the first time this had been done in the United States.
- 27—At an Aero Club exhibition in San Diego, Lt. T. G. Ellyson, USN, Curtiss student, took off in a Curtiss "grass cutter" plane (a ground plane, not supposed to fly) to become the first Naval aviator.
- 30—J. A. D. McCurdy, flying a Curtiss hydroairplane, in the longest over-water flight to date, flew from Key West, Fla., to a point some 10 miles from Havana, where he was picked up by a Navy torpedo boat.

February

- 1—First licensed aircraft manufacturer in the U. S., Burgess and Curtis of Marblehead, Mass., was licensed by the Wright Company.
- 2—The exhibition of the Moisant International Aviators, a company formed to give aerial exhibitions, opened at San Antonio. The aviators, flying Bleriot, cooperated with Brig. General Hoyt, commanding Fort Sam Houston, and Lt. Benjamin D. Foulois in working on problems of reconnaissance, antiaircraft fire, and bombardment.
- 7—Harry S. Harkness flew his Antoinette airplane from North Island, San Diego, to an encampment of U. S. troops on the border near Tia Juana and delivered a military message—a distance of 21 miles in 25 minutes.
- 17—Glenn Curtiss flew a Curtiss seaplane from North Island to the battleship *Pennsylvania* in San Diego harbor, alighted alongside, and was hoisted aboard by a launch crane. Later, he took off from the water and returned

to North Island. This was the first seaplane demonstration with the U. S. Navy.

- 23—The first Curtiss amphibian was demonstrated at North Island, San Diego, by Glenn H. Curtiss, taking off and alighting on land and water.
- 27—At North Island, San Diego, Lt. T. G. Ellyson, USN, flew with Glenn Curtiss in Curtiss' seaplane to become his first seaplane passenger.
- 28—Modesto, Calif., inserted a clause in its charter providing for the building and maintenance of municipal airports when needed.

March

- 3—Lt. Benjamin D. Foulois and civilian pilot P. O. Parmalee made 106-mile non-stop flight from Laredo to Eagle Pass, Tex., in Collier Wright in an effort to prove to ground forces the usefulness of the airplane. Messages dropped and radio telegraphic messages received.
- 3—First appropriations for air operations —\$125,000—was authorized for Army fiscal year 1912.
- 7—A new type airplane radio, employing a small Marconi transmitter and a loop antenna (thereby doing away with hanging antenna) was demonstrated by Percy G. B. Morris and J. A. D. McCurdy at Palm Beach, Fla.
- 13—Captain W. Irving Chambers, USN, was assigned to the Bureau of Navigation to devote exclusive efforts to naval aeronautics.
- 17—The first military-type Model D. Curtiss plane was demonstrated before Army and Government officials at Potomac Park, Washington, D. C. This was the first Curtiss plane bought by the Army (Signal Corps No. 2).
- 21—A new Wright patent for lateral balance, which covered ailerons, was issued to Orville and Wilbur Wright.
- 31—About this date the Missouri National Guard Signal Corps established an air section and members were taught flight

and ballooning—probably the first unit of its kind.

April

- 11—Army's first permanent flying school was inaugurated at College Park, Md., with the request that four hangars be constructed.
- 18—Lt. John Rodgers, USN, first Wright School Navy pilot, soloed at Dayton, Ohio.
- 21—Lts. Thomas D. Milling and Henry H. Arnold were ordered to Dayton, Ohio, to take instructions in flying at the Wright School.
- 27—The first Army Curtiss plane and the second Army Wright plane (both pushers) were accepted at San Antonio, Tex., by the Signal Corps.

May

- 4—The War Department approved sending the Army's first Wright plane to the Smithsonian Institution.
- 8—The first Navy airplane, A-1, an amphibian, was ordered from Glenn Curtiss.
- 10—Lt. G. E. M. Kelly became the second Army officer killed in an airplane when he crash-landed his Curtiss pusher at San Antonio, Tex., to avoid striking a crowd of soldiers during maneuvers.
- 13—Lts. H. H. Arnold and T. D. Milling completed their flying training at Simms Station, Dayton, Ohio, to become the first Wright School Army pilots.

June

- 8—The Connecticut State Air Regulation was the first state air law.

July

- 5—The first flight form (Form N. 277) was approved by the Chief Signal Officer. Its use was inaugurated at the Army's school at Augusta, Ga.
- 10—National Balloon Race, Kansas City, Mo., was won by Lt. Frank P. Lahm,

landing at La Paz, Ind., a distance of 772.486 kilometers.

- 19—The first Navy Wright airplane was delivered at Annapolis by Orville Wright.

August

- 2—Harriet Quimby became the first woman pilot to obtain an FAI certificate in the U. S.; she received No. 37 at Mineola, Long Island, N. Y.
- 5—Lincoln Beachey won the New York-Philadelphia race for the Gimbel \$5,000 purse, in elapsed time of 1 hour 50 minutes 18 seconds—with one stop for fuel.
- 14—Between 14-25 August, Harry N. Atwood flew from St. Louis to New York—1,155 miles—in the longest cross-country flight to date.
- 18—P. O. Parmalee established a new American Altitude record of 10,837 feet at the Chicago Air Meet.
- 20—Lincoln Beachey set a new world altitude record of 11,624 feet at the Chicago Meet.

September

- 4—Lt. T. D. Milling became the first Army officer to fly at night when he landed his plane by the light of gasoline flares at the Boston Meet after participating in the 160-mile tri-state air race, won by Earle L. Ovington.
- 7—Lt. T. G. Ellyson, USN, demonstrated shipboard wire launching of the Navy's Curtiss seaplane, taking the plane off a wire cable stretched from a platform on shore, representing a ship's deck, and alighting on the water at Lake Keuka, Hammondsport, N. Y.
- 17—Calbraith P. Rodgers in a Burgess-Wright biplane began the first trans-continental flight, New York to Pasadena, Calif. The trip—3,390 miles—required 49 days, being completed on 5 November.
- 23—Earle L. Ovington, flying a Queen monoplane, became America's first airmail

carrier to cover a set route from an established post office (Nassau Boulevard, N. Y., to Mineola, N. Y.) for which he was appointed Air Mail Pilot No. 1 by the Postmaster General.

26—Official three-man world flight endurance record of 1 hour 54 minutes 42 seconds set by Lt. T. D. Milling in Wright airplane at Nassau Boulevard, N. Y., winning the Rodman Wanamaker Trophy.

30—Lt. H. H. Arnold was "stunt man" for the leading actor in the pioneer air movie, "The Military Air Scout," photographed at Nassau Boulevard, N. Y., after an air meet held there by the Aero Club of America.

October

10—Riley E. Scott bombsight and dropping device was tested at College Park, Md., from Wright airplane flown by Lt. T. D. Milling, in first military trials.

20—The original Army Wright plane was delivered to the Smithsonian Institution.

25—Lts. T. G. Ellyson and J. H. Towers, USN, established an unofficial nonstop seaplane record of 138.2 miles from Annapolis, Md., to Buckroe Beach, Va., in 2 hours 27 minutes.

November

4—First flight of the new transatlantic airship *Akron*, designed by Melvin Vanniman, took place at Atlantic City, N. J.

December

5—Bell aileron patent issued to the Aerial Experiment Association (Alexander Graham Bell and others). The patent was later purchased by Glenn Curtiss.

17—The first aerial reconnaissance motion picture in America was made at Beaumont, Texas, by Cameraman E. R. Shaw from Robert G. Fowler's Wright in the course of a flight from Beaumont to New York.

1912

January

25—Lt. H. H. Arnold, in a Wright plane, set an Army altitude record of 4,674 feet. This flight, lasting 59 minutes, was made from the Army's Aviation School at Augusta, Ga.

27—Clarence H. Mackay announced the establishment of the Mackay Trophy. The trophy was to be competed for annually by aviators under rules made each year; or it could be awarded by the War Department for the most meritorious flight of the year.

February

8—The second set of military airplane specifications were issued by the Signal Corps.

12—Frank Coffyn took automatic aerial motion pictures from a seaplane over New York harbor.

17—The first physical examination was published by the U. S. Army.

23—The first official recognition of the rating, "Military Aviator," appeared in War Department Bulletin No. 2

March

1—Bert Berry made the first attached-type parachute jump from an American airplane. The jump was made at 1,500 feet over Jefferson Barracks, St. Louis, Mo., from a Benoist pusher flown by Anthony Jannus, using a parachute bought from Leo Stevens, manufacturer of balloons and related lighter-than-air equipment.

11—The Army Air School opened in the Philippines by Lt. Frank Lahm at Ft. William McKinley, Manila, with two volunteer students, Lt. Moss L. Love and Corporal Vernon L. Burge, the latter the first enlisted man taught to fly.

April

1—The Army Flying School transferred from Augusta, Ga., to College Park, Md.

- 15—The Signal Corps ordered its first tractor airplane from the Burgess Company and (Greeley) Curtiss.
- 16—First U. S. licensed woman pilot, Harriet Quimby, flew the English Channel.
- 20—The conditions of the Military Aviator test were published in the report of the Secretary of War to the House of Representatives.

May

- 6—Three Army planes from College Park, Md., flew the first Army group cross-country flight to Chevy Chase Club, Md.
- 22—Marine Corps aviation began when 1st Lt. A. A. Cunningham was ordered to "duty in connection with aviation."
- 24—Paul Beck set a new unofficial American duration record of 4 hours 23 minutes 15 seconds in his airplane, *Miss Columbia*, at Mineola, N. Y.
- 30—Wilbur Wright died on Dayton, Ohio, of typhoid fever at the age of 45.

June

- 5—Lt. Colonel C. B. Winder, Ohio National Guard, became the first National Guard pilot. He was taught to fly at the Army School at Augusta, Ga.
- 7—First firing of a machinegun from an airplane in the U. S. The gun, a ground type designed by Colonel Isaac N. Lewis, was fired by Captain Charles DeF. Chandler, from a Wright B. plane, piloted by Lt. T. D. Milling, at College Park, Md.
- 7—1st Lt. John P. Kelley, MRC, the first air medical officer, was assigned to Signal Corps aviation field, College Park, Md.
- 14—Corporal Vernon Burge became the Army's first enlisted pilot.
- 21—Tiny Broadwick, jumping from Glenn L. Martin's plane near Los Angeles, became the first woman to make a parachute jump from an airplane in the U. S.

July

- 5—Capt. C. DeF. Chandler and 2d Lts. T. D. Milling and H. H. Arnold became the first fliers to qualify as "Military Aviators."
- 25—Navy airplane specifications were published.
- 29—Between 29 July and 1 August, a series of airplane radio-telegraph tests were carried out by Lt. B. D. Foulois in an Army Wright B at College Park. Messages were received for a distance of 10 miles.
- 31—First captapult launching of an airplane demonstrated by Navy Pilot Lt. T. G. Ellyson using a catapult designed and built by Captain W. I. Chambers, USN. The plane lifted from its platform on the seawall at Annapolis, Md., but immediately dived into the water.

August

- 10—At Bridgeport, Conn., from 10 through 17 August, Signal Corps planes for the first time took part in Army maneuvers. The two planes were piloted by Lts. T. D. Milling and B. D. Foulois.

September

- 28—Corporal Frank S. Scott, first enlisted fatality in Signal Corps aviation, was killed in the crash of an airplane in which he was a passenger with Lt. L. C. Rockwell (also killed) at College Park, Md.

October

- 2—George A. Gray, flying a Burgess-Wright plane, began the first flight over the Adirondack Mountains from Malone to Saranac Lake, N. Y., a distance of about 85 miles.
- 8—First Navy physical examination for pilots published by Bureau of Medicine and Surgery.
- 9—First competition for the Mackay Trophy won by Lt. H. H. Arnold, the only contestant.

November

- 5—First artillery adjustments from a plane in the United States begun at Fort Riley, Kans., by Lts. H. H. Arnold, pilot, and Follett Bradley, observer.
- 12—Second, and successful, catapult launching made by Lt. T. G. Ellyson in a Curtiss seaplane from a float at the Washington Navy Yard.
- 27—Army's first flying boat, Signal Corps No. 15, a Curtiss Model F, with 75 horse-power, 8 cylinder Curtiss "O" engine, was accepted at the Curtiss factory.

December

- 19—President Taft appointed a commission to report to Congress on a national aerodynamic laboratory, but the bill to legalize the commission was not passed by Congress.

1913

January

- 13—Beginning of air parcel post demonstrated by Harry M. Jones in a Wright B, covering a route from Boston to New York, carrying a cargo of baked beans for governors along the way.
- 16—Dr. Thaddeus S. C. Lowe, balloonist of Civil War fame, died at Pasadena, Calif.
- 24—The first Curtiss tractor airplane (Signal Corps No. 21) was delivered to the Signal Corps Aviation School at San Diego.

February

- 11—The first bill for a separate aviation corps, H. R. 28728, was introduced by Representative James Hay of West Virginia in Congress but failed to pass.
- 13—Langley Field Aerodynamic Laboratory project inaugurated by the appointment of an advisory committee by the regents of the Smithsonian Institution.

March

- 2—First flying pay authorized—35 percent over base pay for officers detailed on aviation duty.
- 5—Field Order No. 1, Hq., First Aero Squadron in the field near Texas City, Texas, stated: "The First Aero Squadron is hereby organized," but the organization was provisional.
- 6—Lt. J. H. Towers and Ensign G. D. Chevalier, USN, in the Navy Curtiss flying boat, scouted a "hostile fleet" during Guantanamo maneuvers.
- 8—S. S. Jerwan, chief pilot for Moisant, delivered an airmail letter to former President Taft by dropping it from his monoplane in front of Taft's hotel in Augusta, Ga.
- 31—Lt. W. C. Sherman, riding as a passenger with Lt. T. D. Milling on a non-stop cross-country flight from San Antonio to Texas City, make the first Army aerial map from a plane.

April

- 13—At San Diego, Lt. S. H. McLeary set a new Army altitude record of 8,400 feet in his Curtiss plane.
- 21—The first Federal aircraft registration and license bill introduced in the Senate (S. 1295) by Mr. Boise Penrose of Pennsylvania.
- 27—Robert G. Fowler and Cameraman Raymond A. Duhem flew from Panama to Cristobal, ocean-to-ocean, nonstop in 57 minutes. This was the first seaplane flight across the Isthmus of Panama, the first seaplane flight in Panama, the first passenger-carrying flight in Central America, and the pictures were the first taken from the air of the Canal or Central America.

May

- 1—For the second time airplanes participated in Army maneuvers when a Burgess tractor (flown by Lt. Thomas D. Milling with Lt. William C. Sherman

as observer) and a Wright (flown by Lt. Roy C. Kirtland with Lt. Eric L. Ellington as observer) took part in 2d Division maneuvers by making reconnaissance flights at Texas City, Texas.

- 10—War air bombing in America was inaugurated when Didier Masson began a series of bombing raids for Obregon against Mexican Federal gunboats in Guaymas Bay in the Gulf of California.
- 17—Domingo Rosillo flew Key West to Havana in a Morane land monoplane to win a \$10,000 prize, flying 90 miles in 2 hours and 30 minutes.
- 27—Issuance of G. O. No. 39, which provided that Army officers who qualified as Military Aviators would receive a Military Aviator's Certificate and badge. In all, 24 officers qualified.
- 28—Lts. T. D. Milling and W. C. Sherman made a two-man duration and distance record of 4 hours 22 minutes for 220 miles from Texas City, Texas, to San Antonio.
- 30—Massachusetts Institute of Technology's aerodynamics course was instituted under Assistant Naval Constructor Jerome C. Hunsaker.

June

- 12—The first Curtiss tractor, Signal Corps No. 21, was accepted by the Army.
- 20—Ensign W. D. Billingsley became the first Naval aviator to be killed in a plane when he was thrown from a Navy Wright B2 seaplane and was drowned.

July

- 8—First long-distance cruise on a flying boat begun by Beckwith Havens in a Curtiss, flying 885 miles on the Great Lakes.
- 19—Sky writing was initiated by the Bryant brothers when Milton J. (Johnny) Bryant wrote "SP" in fire over Seattle on the last night of the Seattle Potlatch celebration.

October

- 6—Capt. Charles DeF. Chandler and Lt. T. D. Milling who (with Lt. H. H. Arnold) had qualified as Military Aviators on 5 July 1912, were awarded their badges, the only two struck off at that time.
- 14—Patent for automatic stablizer issued to Orville and Wilbur Wright.

November

- 6—Experimental radio and fire control flights were begun at Fort Mills, Philippines, in cooperation with coastal defenses.
- 16—John Domenjoz, Swiss aviator, looped his Bleriot over the Battery and Statue of Liberty in New York, presumably the first performance of the loop.
- 30—First known aerial combat, between Phil Rader, flying for General Huerta, and Dean Ivan Lamb, with Carranza, over Naco, Mexico. Exact date unknown but probably in late November or early December 1913; details unknown except that a dozen or so pistol shots were exchanged.

December

- 4—The first organization for an aero squadron was set forth in G. O. No. 75.
- 26—Army altitude record of 7,800 feet for pilot and passenger was established by Lt. J. C. Carberry and his passenger, Lt. W. R. Taliaferro, in a Curtiss tractor (Signal Corps No. 22) at San Diego, Calif.
- 29—Lts. J. C. Carberry and Fred Seydel won the second Mackay Trophy contest for reconnaissance at San Diego, Calif.
- 31—Orville Wright demonstrated his automatic stabilizer at Dayton, Ohio, for which he received the Collier Trophy for 1913.

1914

January

- 1—America's first regularly scheduled airline started operation across Tampa Bay

between St. Petersburg and Tampa, Fla., with one Benoist flying boat and Tony Jannus as pilot. It lasted three months.

- 31—During the month the first U. S. Naval Air Station was established at Pensacola, Fla.

February

- 5—2d Lt. Joseph C. Morrow, Jr., qualified as "Military Aviator." He was the 24th and last "Military Aviator" under the rules set up for this rating, having passed his test on 27 December 1913.
- 16—Lt. J. C. Carberry and Lt. W. R. Taliaferro, flying a Curtiss plane (Signal Corps No. 23), set an Army altitude record of 8,700 feet at San Diego.
- 16—Seaplanes and flying boats were classed as "vessels" by the Department of Commerce.
- 24—All pusher airplanes were condemned by an Army board meeting at the Signal Corps Aviation School, San Diego. Action was taken because of large number of accidents and deaths in planes of this type.
- 25—Theodore C. Macaulay, flying a Curtiss pusher with OX engine, set a new American land plane altitude record of 12,139.8 feet at San Diego.

May

- 5—The Christmas patent on hinged inset training edge ailerons was issued. The invention later became standard on aircraft.
- 28—Glenn Curtiss flew the rebuilt and modified Langley airplane, with the original engine, off the water at Hammondsport, N. Y. for 150 feet.

June

- 24—The first Curtiss J tractor (Signal Corps No. 29) was received at San Diego. It was the forerunner of the "Jennies."

July

- 7—Dr. Robert H. Goddard was granted a U. S. patent for a two-stage solid-fuel rocket. (This was the first of 69 patents granted to the father of American rocketry.)
- 11—The National Balloon Race, St. Louis, Mo., was won by R. A. D. Preston, landing at Pt. Pleasant, Ky., a distance of 485.732 kilometers.
- 18—The Aviation Section, Signal Corps, created by Congress with Lt. Colonel Samuel Reber (head of Aeronautical Division since 20 October 1913) in charge.
- 23—S. O. 171 appointed a board of officers at the North Island Aviation School, San Diego, to examine candidates for the new aviation mechanic rating.

August

- 10—The first Government license ever issued in America for aircraft went to Tony Jannus, hydroairplane pilot of St. Petersburg-Tampa airline. The license was marked "Issue Number 1," serial No. 54578.
- 17—Official tests of Scott bomb dropping device begun by Captain Goodier in the new Martin T at North Island School, San Diego.

September

- 16—The non-recoil, 6-pounder Davis airplane gun was shown at the New London Ship and Engine Company, Groton, Conn.

October

- 8—16,789-foot official American one-man altitude record was set by Captain H. LeR. Muller in a Curtiss 90 at San Diego.

December

- 8—Lawrence B. Sperry demonstrated the Sperry Gyroscopic stabilizer to a committee of the Aero Club of America; subsequently, he received the Collier Trophy.

- 11—For the first time radio messages were received in an Army airplane at a distance of 10 miles. The experiment was conducted in the Philippines in a Burgess-Wright airplane by Lt. H. A. Dargue, pilot, and Lt. J. O. Mauborgne, designer of the radio set.
- 16—Two-way radio telegraphy between the air and ground was first demonstrated in the Army by Lts. H. A. Dargue and J. O. Mauborgne, flying a Burgess-Wright plane in the Philippines.
- 23—The Mackay Trophy for reconnaissance competitions was won by Captain T. F. Dodd and Lt. S. W. Fitzgerald.
- 30—The first Burgess-Dunne inherently stable armored airplane, Signal Corps No. 36, was accepted by the Signal Corps.

1915

January

- 5—Lt. J. C. Carberry, Signal Corps, and Lt. Arthur R. Christie made a new official two-man American altitude record at San Diego of 11,690 feet. The flight, which lasted 1 hour 13 minutes, was made in a Curtiss tractor (OXX Curtiss 100).

February

- 24—Macy automatic pilot tests were begun at San Diego with Raymond V. Morris, Curtiss test pilot, at the controls.

March

- 3—The National Advisory Committee for Aeronautics was created to supervise and direct the scientific study of flight problems with a view to their practical solution.
- 14—Lincoln Beachey was killed at the San Francisco Exposition when, in pulling out of a dive, the wings broke off from the fuselage of his airplane.

April

- 10—The first Junior Military Aviator test was issued.

May

- 14—A contract was let for first Navy airship D-1, to Connecticut Aircraft Company, and in July a floating airship shed was contracted for.

June

- 22—The first aerial forest patrol took place when Wisconsin State Forester E. M. Griffith was flown by Jack Vilas to observe a forest fire.

July

- 3—Lt. B. Q. Jones, at San Diego, became the first Army officer to loop a plane.
- 6—Capt. V. E. Clark, the first air officer to graduate from Massachusetts Institute of Technology as a Doctor of Aeronautical Engineering, reported at North Island, San Diego.
- 12—A board of officers at San Diego adopted aviation mechanic examination requirements.
- 26—The First Aero Squadron, under Capt. B. D. Foulois, left San Diego for Fort Sill, Okla., for fire control operations with the Field Artillery.

October

- 13—The Wright Company was purchased from Orville Wright by a syndicate headed by William B. Thompson, Harry Payne Whitney, and T. Frank Manville.

November

- 6—First airplane catapult launching from a moving vessel, USS *North Carolina*, Pensacola Bay, Fla., by Commander Henry C. Mustin, USN.
- 19—First squadron cross-country flight of Army's Air Service was begun by 6 Curtiss JN 3's of the 1st Aero Squadron, from Fort Sill, Okla., to Fort Sam Houston, San Antonio, Tex.—439 miles.

December

- 11—The first foreign officers to become flying students in a U. S. Army school—

four Portugese Army officers—reported to the Signal Corps Aviation School at San Diego, Calif.

1916

January

- 5—The 1st Company, 2d Aero Squadron, sailed from San Francisco for the Philippines. This was the first aero squadron to serve outside the United States.

February

- 9—Cpl. A. D. Smith set a world seaplane duration record of 8 hours 42 minutes in a Martin S-Hall Scott 125 at San Diego.

March

- 15—First U.S. tactical air unit in the field, the 1st Aero Squadron, Capt. B. D. Foulois commanding, with headquarters at Columbus, N. Mex., began operations with General Pershing's punitive expedition against Mexico.
- 16—Capt. Dodd, pilot, with Capt. Foulois, observer, in a Curtiss plane, made the first American military aerial reconnaissance when they flew from Columbus, N. Mex., over Mexican territory.
- 21—Organization of Escadrille Americaine, or Nieuport 124 was authorized by French Air Department; the unit later was known as Lafayette Escadrille.

April

- 2—Col. William A. Glassford reported at San Diego to assume command of the Signal Corps Aviation School.
- 3—Capt. William Mitchell reported to Chief Signal Officer to assume charge of the Aeronautics Division.
- 5—The Governors Island Training Corps was organized by Philip A. Carroll. The organization, which undertook to teach civilians to fly, became the nucleus of

the 1st Aero Reserve Squadron which later became the 26th Aero Squadron.

7—Lt. H. A. Dargue and Capt. B. D. Foulois were fired on by Mexican mounted rurales at Chihuahua City, Mexico, where they had landed with dispatches for the U.S. Consul.

- 20—Sgt. Maj. Elliot Cowdin became the first American pilot to receive the French Medaille Militaire.

May

- 20—Lt. Colonel George O. Squier assigned as officer-in-charge of Aviation Section, Signal Corps.

June

- 18—H. Clyde Balsley of the Lafayette Escadrille was shot down near Verdun, France; he was the first American aviator shot down in World War I.

July

- 13—The 1st Aero Company, National Guard, New York, was the first National Guard unit to be taken into the Federal service.

August

- 7—The Wright Company and the Glenn L. Martin Company were merged into the Wright Martin Aircraft Corporation.
- 25—Curtiss Marine Trophy was won by Victor Carlstrom for flying a distance of 661.44 miles.
- 29—First U.S. Coast Guard Aviation Division authorized (but no appropriation provided until 1926).

September

- 2—Plane-to-plane radio was demonstrated at North Island, San Diego, when radiotelegraph messages were sent and received a distance of about two miles between the plane of Lt. W. A. Robertson and A. D. Smith and the plane of Lt. H. A. Dargue and Capt. C. C. Culver.
- 6—First drop of fragmentation bombs by U.S. Army; the bombs, known as the

Barlow "Return Action," were tested at the Signal Corps Aviation Station, Mineola, N. Y.

13—A Field Officers' Course in Aeronautics was established at the Signal Corps Aviation School, San Diego.

21—The National Research Council, formed at the request of President Wilson by the National Academy of Science, held its first meeting in New York.

October

7—National Balloon Race, Muskogee, Okla., was won by H. E. Honeywell, landing at Cascade, Iowa, a distance of 836.86 kilometers.

12—Antony Jannus was killed in Russia while demonstrating a Curtiss flying boat.

November

2—Chicago-New York commercial night airmail line was requested by Glenn Muffly. Sponsored by New York *Times*, Victor Carlstrom flew a mail demonstration over the route on 2-3 November.

18—First National Guard cross-country formation flight, Mineola, N. Y., to Princeton, N. J., and return made by seven JN4's of the 1st Aero Company, New York National Guard, under command of Captain R. C. Bolling.

20—Representative-elect O. C. Bleakley of Franklin, Pa., became the first member of Congress to fly to Washington as a passenger. He flew from Philadelphia, in a plane piloted by Sgt. William C. Ocker.

December

20—U. S. Army Balloon School, was established at Fort Omaha, Nebr.

1917

January

9—Capt. H. H. Arnold was relieved from duty with the Aviation School at San

Diego and ordered to Panama to organize and command the 7th Aero Squadron.

February

13—At Pensacola, Fla., Capt. Francis T. Evans, USMC, looped and spun a sea-plane for the first time in aviation history.

28—For the first time in the U.S., the human voice was transmitted by radio-telephone from airplane to ground at San Diego.

March

13—The birth of Army Air Intelligence took place when an Intelligence subdivision office was approved in the Aeronautical Division by Chief Signal Officer Brig. General George O. Squier.

April

30—During the month Maj. William Mitchell flew over the enemy lines, the first American Army officer to do so.

May

16—Aircraft Production Board created, superseded by Aircraft Board on 1 October 1917, and dissolved on 19 May 1919.

22—Curtiss schools at Newport News and Miami discontinued for use in training civilian pilot candidates for Air Service Signal Officers Reserve Corps; students were assigned to cadet schools at designated universities.

24—French Premier Ribot asked the U.S. to furnish 5,000 pilots, 50,000 mechanics and 4,500 planes for active service by spring of 1918.

26—Maj. T. F. Dodd, Air Service, Signal Corps, was appointed aviation officer on the staff of Commander-in-Chief, American Expeditionary Forces, the beginning oversea organization of the Air Service, AEF.

June

- 2—The Aviation Section became the Airplane Division, Signal Corps. The first contingent of aviation personnel (93 skilled civilian mechanics) to go overseas in World War I sailed for England. The personnel were to study British and French airplanes and manufacturing methods and then return to the U.S.
- 17—The Aeronautical Mission, Aircraft Production Board (known as the Bolling Mission) under Major R. C. Bolling, sailed for Europe.
- 28—Langley Field, Va., was authorized as an experimental air station.
- 30—Lt. Colonel William Mitchell became Aviation Officer, AEF, relieving Maj. T. F. Dodd.

July

- 23—Maj. B. D. Foulois assigned as officer in charge of the Airplane Division.
- 24—First great air appropriation (\$640,000-000) authorized the Aviation Section to expand to 9,989 officers and 87,083 enlisted men.
- 27—Secretary of the Navy authorized a Naval aircraft factory in Philadelphia.
- 27—First British DH4 arrived in the U.S. and was the model for the first American service planes put into production with Liberty engine.
- 28—The first American Aero Squadron to arrive in the American Expeditionary Forces, the 29th Provisional (later the 400th Construction Squadron) docked at Liverpool.

August

- 13—The 1st Aero Squadron sailed for Europe under command of Maj. Ralph Royce, the first squadron to report for flying duty in the AEF.
- 22—Air-to-ground radiophone sets went into the production stage.
- 23—The 1st Reserve Aero Squadron, only squadron of its kind, sailed from New York to France; it was later redesignated the 26th Aero Squadron.

September

- 3—Brig. General William L. Kenly, Field Artillery, became the first Chief of Air Service, AEF, providing a single head for all activities.

October

- 16—Final tests of Army's airplane radio-telephone at Langley Field, Va., achieved records of 25 miles for plane-plane communication and 45 miles airplane-ground.
- 18—McCook Field, Dayton, Ohio, was established as Signal Corps experimental laboratory.
- 18—The Aviation Medical Research Board was established by Signal Corps.
- 29—First American DH4 completed, was flown by civilian test pilot Howard Rinehart at Dayton, Ohio.

November

- 21—The Navy's robot bomber (a flying bomb) was demonstrated to Army, Navy, and civilian aviation experts at Amityville, N. Y.
- 27—Brig. General B. D. Foulois, Signal Corps, was made Chief of Air Service, American Expeditionary Forces.

1918

January

- 19—U.S. School of Aviation Medicine began operations under Major William H. Wilmer, Signal Corps, Hazelhurst Field, Mineola, N. Y.
- 20—Headquarters, I Army Corps, Air Service, organized at Neufchateau, France, with Col. William Mitchell, Signal Corps, as Chief of Air Service, I Army Corps.
- 23—The first American military balloon ascension in the AEF took place at the American Balloon School, Cuperly, Marne, France.

February

- 7—The Joint Army and Navy Technical Aeronautical Board (JANTAB) passed resolution on Instrument Standardization in Army and Navy planes for incorporation in general specifications.
- 16—Plant 1-A for assembly of American made airplanes began operations at Romorantin, France.
- 18—103d Pursuit Squadron, AEF, was formed with members of Lafayette Escadrille and began operations at the front under tactical control of the French.
- 26—The 2d Balloon Company, the first U.S. Air Service unit to serve with American troops at the front in World War I, arrived at the Toul Sector; it was assigned to I Corps, and began operations on 5 March 1918.
- 28—Under President Wilson's proclamation, licenses were required for civilian pilots or owners of airplanes.

March

- 8—Maj. Edward C. Schneider and Maj. James L. Whitney, in simulated altitude flight, reached an artificial altitude of 34,000 feet in 24 minutes at Signal Corps Laboratory, Mineola, N. Y.
- 11—First DSC, awarded to Army Air Service personnel, went to Lt. Paul Baer of 103d Squadron for attacking a group of seven German pursuit planes, one of which he destroyed.
- 14—First activities of 1st Pursuit Group when an element of two pilots of the 95th Squadron went on patrol in France.
- 19—First operations across the lines in France made by the 94th Squadron of the 1st Pursuit Group.
- 20—The 28th Pursuit Squadron was attached by flights to various RAF squadrons on the British Front, in France.

April

- 1—American Aviation Headquarters opened in Rome, Italy, and a definite agreement

made with Italians for training of American pilots.

- 11—First U.S. patrol over enemy lines by an observation squadron in World War I made by I Corps Observation Squadron, 1st Observation Group, equipped with biplace Spads.
- 14—Lts. Douglas Campbell and Alan F. Winslow of the 94th Squadron, 1st Pursuit Group, brought down the first two enemy airplanes downed by the American Expeditionary Forces over Toul Airdrome.
- 27—Brig. General William L. Kenly put in charge of the Air Service Division, formerly Air Division.
- 29—Lt. Edward V. Rickenbacker, who later became the American Ace of Aces, shot down his first enemy airplane.

May

- 2—Lt. Colonel Henry J. Damm and Maj. Oscar Brindley were killed while testing DH-4 at Dayton, Ohio.
- 9—Flight surgeons organized and were assigned to U.S. flying fields.
- 11—The first American-made DH-4, with Liberty engine, was received in the AEF.
- 15—The Government's first permanent air-mail route, Washington to New York, was inaugurated by Army pilots.
- 18—American day-bombardment aviation began with the establishment of the 96th Squadron at Amanty Airdrome, France.
- 20—Army aeronautics was divorced from the Signal Corps and two air departments were created: Bureau of Military Aeronautics and Bureau of Aircraft Production.
- 21—Maj. General William L. Kenly became Director of Military Aeronautics.
- 29—Brig. General Mason M. Patrick was appointed Chief of Air Service, AEF.
- 29—John D. Ryan was made Director of Aircraft Production.

June

- 12—The first American Expeditionary

Forces day-bombing was done by the 96th Aero Squadron from Amanty airdrome in France on Dommary-Baroncourt yards.

July

- 20—148th Pursuit Squadron began operations with the RAF in the field from Capelle airdrome, near Dunkirk.

August

- 2—First patrol along the front by American-built DH-4's with Liberty engines, when a patrol of 18 airplanes of the 135th Corps Observation Squadron flew from the airdrome of Ourches, France.
- 17—The first Martin bomber was flown at Cleveland by Thomas Eric Springer.
- 28—John D. Ryan, the first Director of Air Service, was appointed to administer the Bureau of Aircraft Production and the Division of Military Aeronautics, and was made Assistant Secretary of War.

September

- 5—W. C. Potter was appointed Director of Aircraft Production, succeeding John D. Ryan.
- 7—The first U.S. demonstration of troop transport by air when several planes carried 18 enlisted men from Chanute Field to Champaign, Ill.
- 12—Between 12 and 15 September, the greatest air armada to date, when 1,481 planes under Brig. General William Mitchell participated in the St. Mihiel offensive.
- 12—Lt. Frank Luke, 27th Aero Squadron, shot down his first balloon. When he was killed 17 days later (29 September) he had shot down 18 balloons and airplanes. For his exploits he was posthumously awarded the Congressional Medal of Honor, first aviator to receive the medal.
- 25—Lt. Edward V. Rickenbacker, 94th Aero Squadron, attacked seven enemy planes near Billy, France. For this exploit, he

later received the Congressional Medal of Honor.

- 28—A JN4 maneuvered another JN4 solely by radio at Langley Field, Va.

October

- 3—Flight refueling was demonstrated by Lt. Godfrey L. Cabot, USNR, who lifted 155 pounds of weights into his Burgess-Dunne seaplane from a moving sea sled. In a second flight exactly two years later Cabot picked up a 5-gallon can of gasoline from a float in the Potomac River near Washington.
- 9—The highest concentration of air forces to date—more than 250 bombers and 100 pursuit planes—dropped 32 tons of bombs in the cantonment district between La Waville and Damvillers.
- 12—First night air pursuit operations by American pilots were flown by members of the 185th Squadron in France.
- 15—Brig. General William Mitchell designated Chief of Air Service Army Group. This designation was disapproved by the General Staff and abolished.

November

- 9—155th Night Bombardment Squadron was the last American squadron assigned to the Armies before the close of hostilities.
- 10—Last patrol of American Air Service over enemy lines was made by 3rd Pursuit Group.
- 10—Dr. Robert H. Goddard fired several rocket devices (including an intermittent-firing, long-range rocket; and a projectile (bazooka-type) rocket) before representatives of the Signal Corps, Air Service, Army Ordnance, and others at Aberdeen Proving Ground, Md.
- 14—Brig. Gen. William Mitchell was appointed Chief of Air Service, Third Army.

December

- 4—Start of first Army transcontinental flight by four Curtiss JN4's under Maj. Albert D. Smith, from San Diego to

Jacksonville, which was reached on 22 December.

13—Col. James A. Mars succeeded W. C. Potter as Director of Aircraft Production.

23—Maj. Gen. C. T. Menoher was appointed Director of Air Service. He assumed his duties 2 January 1919.

1919

March

10—Brig. Gen. William Mitchell succeeded Maj. Gen. W. L. Kenly as Director of Military Aeronautics under the Director of Air Service.

April

19—American distance record was set in nonstop flight, Chicago to New York, by Capt. E. F. White and mechanic H. M. Schaefer in DH-4-Liberty 400 flying a distance of 738.6 miles in 6 hours 50 minutes.

23—Under S. O. 95, the following were rated Military Aviators for Distinguished Service in World War I, with 75 percent flying pay: Brig. Gen. William Mitchell, Lt. Cols. Lewis H. Brereton (MA from 1913), and John W. Reynolds, Maj. Melvin A. Hall, Carl Spaatz, and Capt. Reed M. Chambers.

28—The first jump from an airplane with free-type backpack parachute (later adopted as standard) was made at McCook Field, Dayton, Ohio, by civilian Leslie Irving who jumped from a DH-9 flown by Floyd Smith, designer of the parachute.

May

8—First transatlantic crossing begun by Lt. Comdr. Albert C. Read and crew in Navy plane NC-4. Two other planes which started the trip did not complete the flight.

19—M/Sgt. Ralph W. Bottriell made the first jump by Army personnel with a free backpack type parachute. This event was the first action in point of time for

which the Distinguished Flying Cross was awarded.

June

1—In response to a request for the District Forester, San Francisco, the first organized and sustained aerial forest fire patrol was initiated at Rockwell Field, Calif. The patrol used Curtiss JN4D and JN6H planes.

14—(14-15 June) First nonstop Atlantic crossing from St. Johns, Newfoundland to Clifden, Ireland, 1,936 miles, was accomplished by Capt. John Alcock and Lt. A. W. Brown of England in a Vickers-2 Rolls 400 in 15 hours, 57 minutes. They divided the \$50,000 *London Daily Mail* prize.

July

24—(24 July-9 November) Coastal-and-border circuit flight of U.S. completed by Lt. Colonel R. S. Hartz and Lt. E. E. Harmon and crew in Martin Bomber-2 Liberty 400, a distance of 9,823 miles with flying time of 114 hours, 25 minutes.

August

14—First air mail delivered by Aeromarine flying boat to a steamer at sea was delivered to the White Star Liner *Adriatic*.

28—(28 August-19 September) Lawson "airliner," 26-passenger twin Liberty biplane, made a demonstration trip from Milwaukee to Washington, via Chicago, New York, and other cities.

September

1—Dive bombing was demonstrated about this date at Aberdeen Proving Ground by Lt. Lester B. Sweely, Air Service Reserve, in a DH4B, dropping a 300-lb. demolition bomb, carried under the fuselage.

6—New unofficial world altitude 2-man record of 28,250 feet was set by Maj.

R. W. Schroeder and Lt. G. A. Elfrey in a Lepere Liberty 400 at Dayton, Ohio.

16—Four JN4D's from Corpus Christi provided relief to seven persons isolated in the area by storm and flood.

18—Roland Rohlf's set a world altitude record of 32,450 feet in a Curtiss triplane K 12 Curtiss 400 at Garden City, N. Y.

24—Maj. R. W. Schroeder, flying a Lepere at McCook Field, Ohio, set an altitude record of 30,900 feet for a plane carrying a passenger.

October

8—Start of Army transcontinental reliability and endurance test, New York to San Francisco and return. Forty-four planes completed westbound; 15 eastbound; 10 made the round trip. On basis of elapsed time Lt. B. W. Maynard in a DH4 won east-west and round trip, and Maj. Carl Spaatz in a DH4B won west-east.

30—Reversible pitch propeller tested at McCook Field, Dayton, Ohio.

1920

February

27—Official world altitude record of 33,113 feet was set by Maj. R. W. Schroeder in Lepere-Liberty 400 at McCook Field, Dayton, Ohio.

May

26—GAX twin-Liberty engine armored triplane, armed with eight machine guns and a 37-mm. cannon, was tested at McCook Field, Dayton, Ohio.

June

4—Approval of Army Reorganization Bill which created an Air Service with 1,514 officers and 16,000 enlisted men. New rating of "Airplane Pilot" superseded former ratings; flying pay of 50 percent above base pay was authorized.

5—Appropriation bill limited Air Service to land bases.

8—A new unofficial world record parachute jump of 19,861 feet was made by Lt. John H. Wilson over San Antonio, Texas.

July

7—F-5L Navy seaplane was flown by radio compass from Hampton Roads, Va., to USS *Ohio*, at sea.

September

8—Transcontinental mailroute, combination plane-train, from New York to Chicago to San Francisco was completed.

11—Three airships flew formation under radio direction at Langley Field, Va.

25—National Balloon Race, Birmingham, Ala., was won by H. E. Honeywell, landing at Chatham, Ontario, a distance of 1,126.543 kilometers.

November

1—U.S. international passenger service was started by Aeromarine West Indies Airways between Key West, Fla., and Havana, Cuba.

25—First Pulitzer race was won by Lt. C. C. Moseley in a Verville-Packard 600 at Mitchel Field, N. Y., flying a distance of 132 miles at a speed of 156.54 mph.

1921

February

18—First emergency free-type parachute escape from a U. S. plane was made by C. C. Eversole, airmail pilot, near Minneapolis. The jump was at 800 feet from a DH-4, which had lost its right propeller and had gone into a dive and spin.

21—(21-24 February) Lt. William D. Coney, Air Service, made a solo transcontinental flight from Rockwell Field, Calif., to Jacksonville, Fla., in 22 hours 27 minutes flying time.

22—(22-23 February) Jack Knight and E.

M. Allison flew the first transcontinental airmail flight from San Francisco to New York in 33 hours 20 minutes, with Knight flying at night from North Platte, Nebr., to Chicago.

March

- 23—Lt. A. G. Hamilton dropped 23,700 feet by parachute, at Chanute Field, Ill.

May

- 23—The National Balloon Race at Birmingham, Ala., was won by R. H. Upson, landing at Stuart, Va., a distance of 683.972 kilometers.

June

- 8—The first flight of an Army Air Service pressurized cabin airplane was made.

July

- 13—(13-21 July) In a series of Army-Navy bombing tests, airplanes sank the captured German destroyer *G-102*, light cruiser *Frankfort*, and battleship *Ostfricsland*, proving the vulnerability of naval craft to aerial attack.

August

- 10—The Navy Bureau of Aeronautics was formed with Rear Admiral William A. Moffett in charge.

September

- 23—Day and night bombardment test flights were begun; they resulted in the sinking of the battleship *Alabama* in the Chesapeake Bay by a 2,000-lb. bomb.
28—Lt. John A. Macready, Air Service, set a world altitude record for airplanes by flight to 34,509.5 feet in Lepere biplane over Dayton, Ohio.

October

- 5—Maj. Gen. Mason M. Patrick became Chief of Air Service.

November

- 5—Bert Acosta in a Curtiss Navy C12 Curtiss 400 won the Pulitzer Race at 176.7 mph at the Omaha, Nebr., air meet.
12—The first "air-to-air" refueling was made when Wesley May, with a five-gallon can of gasoline strapped to his back, transferred from the wing of a Lincoln Standard, flown by Frank Hawks, to the wing skid of a JN4, flown by Earl S. Daugherty, climbed to the engine, and poured the gasoline into the tank.
15—Initial flight of airship *Roma* at Langley Field, Va.

December

- 1—Initial flight of first airship using helium gas as substitute for hydrogen—the USN dirigible C-7. The flight was from Hampton Roads, Va., to Washington, D. C., and return.
29—World endurance record of 26 hours 18 minutes 35 seconds was set at Roosevelt Field, N. Y., by Edward Stinson and Lloyd Bertaud in a Larsen Junker-BMW 185.

1922

March

- 20—The Navy's first airplane carrier, USS *Langley* (the converted collier, *Jupiter*), was commissioned at Norfolk, Va.

June

- 16—Night cross-country flights, Bolling Field, D. C., to Langley Field, Va., and return, were initiated by Lt. C. L. Bissell.
16—The first United States helicopter flight of importance was made by Henry Adler Berliner at College Park, Md., before representatives of the U. S. Bureau of Aeronautics.

1923

July

- 14—Aeromarine Airways started Detroit-Cleveland flying boat service.

August

- 2—An unofficial 3-man altitude record of 23,350 feet was set at McCook Field, Dayton, Ohio, by Lt. L. Wade, Capt. A. W. Stevens, and Sgt. Longham in a supercharged bomber.
- 5—Lt. Clayton Bissell began first model airway flight, Washington-Dayton-Washington.
- 16—The Sperry airway light beacon was demonstrated at McCook Field.

September

- 4—The first transcontinental crossing within a single day was made by Lt. J. H. Doolittle in a rebuilt DH4B-Liberty 400, from Pablo Beach, Fla., to Rockwell Field, San Diego, a distance of 2,163 miles in 21 hours 20 minutes flying time.
- 14—First transcontinental airship flight was begun by the non-rigid C2, Langley Field, Va., to Foss Field, Arcadia, Calif., with Maj. H. A. Strauss commanding; the trip was completed 23 September.
- 27—The first "radar observations" were made by Dr. Albert Hoyt Taylor and Leo C. Young of the Naval Aircraft Radio Laboratory, Anacostia, D. C.

October

- 5—Lts. J. A. Macready and O. G. Kelly, in a Fokker Transport T2-Liberty 375, set an endurance record of 35 hours 18 minutes and 30 seconds, at Rockwell Field, San Diego.
- 13—The Liberty Engine Builders' Trophy Race was won by Lt. T. J. Koenig in a Lepere-Liberty 400 with a speed of 128.8 miles per hour over a 257.7-mile course at National Airplane Races, Selfridge Field, Mich.
- 18—A world speed record of 222.96 mph for 1 kilometer was set by Brig. Gen. Wil-

liam Mitchell in a Curtiss R6-D12 Curtiss 375, at Mt. Clemens, Mich.

- 23—American Propeller Company demonstrated the reversible propeller at Bolling Field, D. C.

November

- 8—The airfield at Montgomery, Ala., was named Maxwell Field.
- 8—The School for Flight Surgeons was renamed The School of Aviation Medicine.

1923

February

- 7—A hazardous mercy flight over frozen Lake Michigan was made by 1st Lt. Russell A. Meredith, 1st Pursuit Group, Selfridge Field, to bring a doctor to a dying man on Beaver Island. Lt. Meredith was later awarded the DFC.

March

- 5—Auxiliary jettisonable belly tank, fitted to bomb rack of MB3A at Selfridge Field, Mich., increased flying radius to about 400 miles.
- 29—Lts. H. R. Harris and Ralph Lockwood in DH4L Liberty 400 set world speed record for 1,000 kilometers of 127.42 mph, at Dayton, Ohio.
- 29—Lt. R. L. Maughan in a Curtiss 465, at McCook Field, Dayton, Ohio set world speed record of 236.587 mph.

April

- 17—A world speed record of 114.35 mph for 1,500 kilometers was set by Lt. H. R. Harris in a DH4L-Liberty 375 at Dayton, Ohio.

May

- 2—(2-3 May) The first nonstop transcontinental flight, 2,520 miles, New York to San Diego, was flown by Lts. O. G. Kelly and J. A. Macready in a Fokker T2-Liberty 375 with a flying time of

26 hours 50 minutes 3 seconds. The DFC and Mackay Trophy were awarded for the flight.

- 26—A nonstop transcontinental south-north flight, Ellington Field, Houston, Tex., to Gordon, Ontario, was made by Lt. H. G. Crocker in a DH4B-Liberty 400 with a flying time of 11 hours 55 minutes.

June

- 20—First flight of the first all-metal plane, Gallaudet CO 1, Liberty 400, designed by the Air Corps engineering division.
- 27—The first complete pipeline refueling between two airplanes was made by Capt. L. H. Smith and Lt. J. P. Richter at San Diego.

August

- 21—First airways illumination, when 42 landing fields on the Chicago-Iowa City-Omaha-North Platte-Cheyenne Route were lit by 18- and 36-inch electric arc beacons, visible for 50 miles.
- 27—(27-28 August) New world refueled duration record of 37 hours 15 minutes 14.8 seconds, and distance record of 3,293.26 miles was set by Lts. Lowell H. Smith and John P. Richter in a DH4B-Liberty 400 at Rockwell Field, San Diego.

September

- 5—Condemned naval vessels *New Jersey* and *Virginia* were destroyed by bombing during Army bombing tests off Cape Hatteras, N. C.
- 13—(13 September-14 December) A round trip transcontinental tour, anticipating national airways, was made by Lts. J. F. Whitely and H. D. Smith and crew in a Martin-2 Liberty 400, from Langley Field, Va., to San Diego and return, a distance of 8,000 miles.

October

- 6—Lt. A. J. Williams, USN, flying a Curtiss Racer at St. Louis, Mo., set new world

speed records of 243.8 mph for 100 kilometers, and 243.7 mph for 200 kilometers over a closed circuit.

- 10—The first American-built rigid dirigible, and first of the Zeppelin type to use helium gas was christened the *Shenandoah*.
- 25—Barling bomber (a 6-engine, triplane), flown by Lt. H. R. Harris and crew, set several weight-carrying records: greatest weight of 3,000 kilograms; and duration and altitude records of 1 hour 19 minutes 11.8 seconds; and 5,344 feet.

December

- 18—The Christmas aileron patent claim was settled by the U. S. Government, which bought the patent rights for \$100,000.

1924

February

- 21—Alaskan airmail was flown by Carl B. Eielson from Fairbanks to McGrath.
- 22—Lt. J. A. Macready, in an XC-05A-Liberty 400, set U. S. altitude record of 38,704 feet.

March

- 4—Two Martin bombers and two DH4's broke an ice jam in the Platte River at North Bend, Nebr., after six hours of bombing.
- 7—Lt. E. H. Barksdale and navigator B. Jones in a DH4B-Liberty 400 navigated on instruments from McCook Field, Dayton, Ohio, to Mitchel Field, N. Y., a distance of 575 miles.

April

- 6—(6 April-28 September) Air Services Officers made the first round-the-world air tour, the first trans-Pacific flight, and the first westbound Atlantic crossing. Leaving from and returning to Seattle, they flew 26,345 miles in 363 hours flying time, with an elapsed time of 175 days.
- 23—National Balloon Race, San Antonio,

Tex., was won by W. T. Van Orman who landed at Rochester, Minn., covering a distance of 1,725.22 kilometers.

June

- 23—Daylight transcontinental, New York to San Francisco, in PW8-D12 Curtiss 375, by Lt. R. L. Maughan: 2,670 miles in 21 hours 48 minutes 30 seconds, including 5 brief refueling stops.

July

- 1—Through transcontinental airmail service was begun by U. S. Post Office.

October

- 15—ZR-3 (Later renamed the *Los Angeles*), the first dirigible sent to the U. S. Navy from Germany under reparations agreement, arrived at Lakehurst, N. J.
- 28—Army airplanes broke up cloud formations at 13,000 feet over Bolling Field, D. C., by blasting with electrified sand.

1925

February

- 2—President Coolidge signed the Kelly Bill authorizing contract air transport of mail.

April

- 13—Henry Ford started an airplane freight line between Detroit and Chicago—the first such commercial flights on a regular schedule.

May

- 1—National Balloon Race at St. Joseph, Mo., was won by Ward T. Van Orman and C. K. Wollan, landing at Reform, Ala., a distance of 941.468 kilometers.

July

- 15—Dr. A. Hamilton Rice Expedition, the first to employ a plane in exploration, returned from the Amazon; Lt. Walter Hinton piloted the Curtiss Seagull plane.

August

- 4—The beginning of the MacMillan polar expedition, with Navy assistance consisting of Loening amphibians under Lt. Comdr. Richard E. Byrd.
- 31—(31 August-8 September) in Navy's attempted San Francisco-Honolulu flight, Comdr. John Rodgers and crew alighted short of their mark, but set a nonstop seaplane record of 1,841 miles.

September

- 3—Navy dirigible *Shenandoah* collapsed in a storm over Ava, Ohio, killing 14 of 43 persons on board.
- 12—Morrow Board was appointed by President Coolidge to determine United States air policy.
- 15—RS-1, the first great semi-rigid helium airship constructed in America, was completed at Scott Field, Ill.

October

- 12—Lt. Cyrus Bettis, Air Service, flying a Curtiss R3 C-1, Curtiss V, at Mitchell Field, N. Y., set new world speed records of 249.3 mph for 100 kilometers, and 249 mph for 200 kilometers over a closed circuit.

November

- 10—Maj. Thomas G. Lanphier, Air Service, flew from Selfridge Field, Mich., to New York City, 550 miles, in 3 hours 20 minutes.

December

- 17—Gen. William Mitchell was found guilty of violating the 96th article of war. He was given a sentence of five years suspension of rank, pay, and command. He then resigned from the Army.

1926

January

- 29—An American altitude record of 38,704

feet was set by Lt. J. A. Macready in an XC05A-Liberty 400 at Dayton, Ohio.

March

- 16—Dr. Robert Goddard launched the world's first liquid fueled rocket at Auburn, Mass. It travelled 184 feet in 2-½ seconds at an average speed of 60 mph.

April

- 16—The Department of Agriculture purchased its first cotton-dusting plane.
29—National Balloon Race at Little Rock, was won by Ward T. Van Orman and W. W. Morton, who landed at Petersburg, Va., a distance of 848 miles.

May

- 9—The first flight to the North Pole was made by Richard Byrd, navigator, and Floyd Bennett, pilot, in a Fokker Monoplane.
12—Lincoln Ellsworth, American explorer, flew across the North Pole in the dirigible *Norge*, commanded by Roald Amundsen.
20—President Coolidge signed the Air Commerce Act, the first federal legislation regulating civil aeronautics.

July

- 2—First known reforestation by airplane was carried out in Hawaii.
2—The Air Corps Act became law and the Air Service was redesignated the Air Corps. It also made provision for an Assistant Secretary of War for Air and for a five year Air Corps expansion program.
2—Congress established the Distinguished Flying Cross (made retroactive to 6 April 1917).
14—Armstrong seadrome model was demonstrated at Wilmington, Del., to Air Service personnel.
16—F. Trubee Davison was appointed as first Assistant Secretary of War for Air.

August

- 18—The first contract was let for a metal-clad airship.
25—The pilot of a JN training plane, which carried an attached and stored parachute, opened the chute at 2,500 feet over San Diego Naval Air Station; the chute landed the plane, although not without some damage.

December

- 7—An airway beacon was erected by the Aeronautics Branch, Department of Commerce, on the Chicago-Dallas route.
21—Pan American good will flight of 22,065 miles, from San Antonio, Tex., around South America to Washington, D. C., with Maj. H. A. Dargue commanding; Loening amphibians with Liberty 400 engines. The Mackay Trophy and DFC were awarded.

1927

April

- 12—A new American duration record of 51 hours 11 minutes 25 seconds was set by Clarence D. Chamberlin and B. B. Acosta in a Bellanca-15 Wright 200.

May

- 4—Capt. H. C. Gray, Air Corps, reached an unofficial altitude of 42,470 feet in a free balloon at Scott Field, Ill.
21—The first solo nonstop transatlantic flight—New York to Paris—was completed by Charles A. Lindbergh.
25—Lt. James H. Doolittle flew the first successful outside loop.

June

- 4—Clarence D. Chamberlin and passenger made the first nonstop flight to Germany, a distance of 3,911 miles, in 43 hours 49 minutes 33 seconds, in a Bellanca 15 Wright 200.
28—(28-29 June) First nonstop Hawaiian

flight, from Oakland, Calif., to Wheeler Field, Honolulu, was made by Lts. L. J. Maitland and A. F. Hegenberger in a Fokker C2-3 Wright 220. They flew 2,407 miles in 25 hours 50 minutes with navigation accomplished by directional beacons of San Francisco and Maui. The Mackay Trophy for 1927 and DFC were awarded for the flight.

- 29—(29 June-1 July) Lt. Comdr. Richard E. Byrd, Lt. G. O. Noville, Bert Acosta, and Bernt Balchen, in the airplane *America*, established a record 4-passenger flight. They flew from Roosevelt Field, N. Y., to Ver-Sur-Mer, France (about 125 miles from Paris), an airplane distance of 3,477 miles, in 46 hours 6 minutes.

July

- 25—A world airplane altitude record of 38,418 feet was established by Lt. C. C. Champion, USN, in a Wright P&W 425.

August

- 16—A. C. Goebel and Lt. W. V. Davis, USN, won the Dole Oakland-Honolulu race in 26 hours 17 minutes 33 seconds. No other plane completed the flight.

September

- 1—Air express operations were begun by American Railway Express and major airlines.
- 10—Gordon Bennett international balloon race, Dearborn, Mich., was won by E. J. Hill and A. G. Schlosser, 745 miles.

October

- 12—Wright Field, Dayton, Ohio, was formally dedicated.
- 28—The first air-passenger international station was established at Meacham Field, Key West; the first flight from the station was made by Pan American World Airways to Havana, Cuba.

November

- 16—Navy aircraft carrier *Saratoga* was commissioned.

December

- 13—Col. Charles A. Lindbergh began a goodwill flight to Mexico, Central America, and the West Indies.
- 14—Maj. Gen. J. E. Fechet succeeded Maj. Gen. M. M. Patrick as Chief of Air Corps.

1928

February

- 3—Lt. H. A. Sutton began at Wright Field a series of spin tests to study the spinning characteristics of planes. For his work he was awarded the Mackay Trophy.
- 12—Charles (Speed) Holman established a new record of 1,093 loops at Wold-Chamberlin Airport, Minneapolis.

April

- 15—(15-21 April) The first eastbound Arctic crossing was made in a Lockheed Vega monoplane with skis by Capt. G. H. Wilkins and Lt. C. B. Eielson, Point Barrow to Green Harbor, Spitzbergen, 2,200 miles in 20 hours 20 minutes flying time. En route the plane was grounded for five days by a storm.

May

- 12—A record flight for single-seater planes from France Field, Canal Zone, to Bolling Field, D. C., was made by Lts. R. W. Douglas and J. E. Parker in two Boeing PW9-D12 Curtiss'.

June

- 16—Successful tests were made at Wright Field, Dayton, Ohio, of superchargers designed to give sea level pressure at 30,000 feet, and a new liquid oxygen system for high altitude flying.
- 18—Amelia Earhart, first woman to cross the Atlantic by air, arrived in England in airplane piloted by Wilmer Stultz.
- 30—(30 June-1 July) International Gordon Bennett Balloon Race, Detroit, was won by the United States for the third suc-

cessive time, insuring permanent possession of trophy; pilot, Capt. W. E. Kepner; aide, Lt. W. O. Eareckson; distance, 460 miles.

August

19—(19-20 August) Arthur Goebel in a Lockheed-Vega monoplane flew across-country from Los Angeles to Curtiss Field, Long Island, setting a new record of 18 hours 58 minutes (previous record was 26 hours 50 minutes 38 seconds).

September

19—First diesel engine to power heavier-than-air craft, designed by I. M. Woolson and manufactured by Packard Motor Car Company, was flight tested at Utica, Mich.

October

10—Capt. St. Clair Streett, pilot and Capt. A. W. Stevens, observer and photographer, set a world altitude record of 37,854 feet for planes carrying more than one person in flight from Wright Field, Dayton, Ohio.

19—In a paratroop demonstration, a 6-man machine-gun team parachuted from a 6-airplane formation over Brooks Field, Tex.

29—First paying woman Zeppelin passenger, Mrs. Clara Adams of Tannersville, Pa., left Lakehurst, N. J. in *Graf Zeppelin* on eastward return flight to Germany.

December

19—The first autogiro flight in the United States was made by Harold F. Pitcairn, Pitcairn Field, Willow Grove, Pa.

20—The first long airplane flight over the Antarctic, 10 hours in the air, was made by Capt. Sir Hubert Wilkins and Lt. Carl Ben Eielson, of a British expedition.

1929

January

1—(1-7 January) An unofficial endurance record for refueled airplane flight was set by Maj. Carl Spaatz and Capt. Ira C. Eaker in the *Question Mark*, Fokker C2-3 Wright 220, over Los Angeles Airport, with flying time of 150 hours 40 minutes 15 seconds.

9—(9-16 January) C-2 Army transport, first airplane ferried by Army Air Corps to a foreign station, flew from Wright Field, Dayton, Ohio, to France Field, Central America, about 3,130 miles, with Maj. Paul Bock commanding.

February

11—Miss Evelyn Trout set women's solo endurance record by staying aloft 17 hours 5 minutes 37 seconds.

April

24—Miss Elinor Smith, at Roosevelt, Long Island, set a women's solo endurance record by staying aloft 26 hours 21 minutes 32 seconds.

May

4—The National Balloon Race, Pittsburgh, Pa., to Canavoy, Savage Harbor, Prince Edward Island, 925 miles, was won by Lt. T. G. W. Settle, USN, and Ensign W. Bushnell, USN.

July

7—Forty-eight hour transcontinental train-plane service was inaugurated by Transcontinental Air Transport, Inc.

17—A liquid-fueled 11-foot rocket, fired by Dr. Robert Goddard at Auburn, Mass., carried a small camera and a barometer. Both were recovered intact after the flight.

August

- 15—(15 August) Lt. Nicholas B. Mamer and Arthur Walker in Buhl sesquiplane *Spokane Sun God* with Wright Whirlwind engine flew from Spokane, Wash., to the east coast and back, a record non-stop distance flight of 7,200 miles, being refueled in the air 11 times.

September

- 24—Lt. James H. Doolittle made the first all-blind flight at Mitchel Field, Long Island. With completely covered cockpit (but accompanied by a check pilot) he took off, flew a short distance, and landed.

October

- 21—Air Ambulance Service was organized by Colonial Flying Service and Scully Walton Ambulance Company, New York, N. Y.

November

- 29—Comdr. Richard E. Byrd, in a tri-motor Ford piloted by Bernt Balchen, made the first flight over the South Pole.

December

- 5—Admiral Richard E. Byrd made a 400-mile aerial mapping flight along the coast of Antarctica.
- 12—Langley medals were presented to Admiral Richard E. Byrd for his flights over the Poles, and to Charles M. Manly for his pioneer development of airplane engines.

1930

April

- 6—Transcontinental glider in tow was piloted by Capt. Frank Hawks from San Diego to New York, 2,860 miles, in 36 hours 47 minutes.
- 12—The U. S. Army Corps set a new world record for altitude combat formation

flying at Mather Field, Sacramento, Calif., when 19 planes of the 95 Pursuit Squadron, commanded by Capt. H. M. Elmendorf reached a height of 30,000 feet. The previous record was 17,000 feet.

June

- 4—Lt. Apollo Soucek, USN, flying a Wright Apache, set a new world altitude record of 43,166 feet at the Naval Air Station, Anacostia, D. C.
- 11—(11 June-4 July) World endurance record of 553 hours 41 minutes 30 seconds was established by John and Kenneth Hunter.
- 21—Randolph Field, San Antonio, Texas, was dedicated.

July

- 22—A German airmail plane catapulted from shipboard when 250 miles out en route to New York.

October

- 25—First transcontinental through air service opened simultaneously from New York City and Los Angeles by Transcontinental and Western Air, Inc.

November

- 9—Capt. Roy W. Ammel of Chicago, flying a Lockheed Sirius Blue Flash P&W Wasp, began the first solo nonstop flight from New York to Panama Canal Zone. On the trip, Ammel flew 2,700 miles in 24 hours 35 minutes.
- 24—Ruth Nichols, who took off on 24 November from Mineola, N. Y., in Lockheed Vega airplane, arrived at Burbank, Calif., 1 December, thus breaking the east-west women's transcontinental record; flying time 16 hours 59 minutes 30 seconds.

December

- 9—Ruth Nichols began flight from Los Angeles to New York which set

new women's one-stop transcontinental speed record of 13 hours 22 minutes flying time.

1931

February

12—First sale of commercial autogiro in the United States was made when the *Detroit News* bought a Pitcairn PC A-2.

14—Air Mail Flyer's Medal of Honor was established by Congress (made retroactive to 15 May 1918).

March

30—Transfer of mail from an airplane to an airship at Scott Field, Ill.

April

8—Amelia Earhart flew an autogiro to an altitude of 19,000 feet at the Pitcairn Aviation Field near Philadelphia.

10—Airship sub-cloud observation car was demonstrated by Lt. Wilfred J. Paul at Langley Field, Va.

May

25—(25-28 May) A world endurance record, non-refueled, of 85 hours 32 minutes 28 seconds was set by Walter E. Lees and F. A. Brossi in a Bellanca Packard Diesel, 225 hp., at Jacksonville, Fla.

27—The first full-scale wind tunnel for testing airplanes was placed in operation at the Langley Field Laboratory of the National Advisory Committee for Aeronautics.

June

23—Wiley Post and Harold Gatty left New York on their round-the-world flight in the *Winnie Mae* (Lockheed-PW550). They completed the trip on 1 July, having flown 15,474 miles in 8 days 15 hours 51 minutes.

July

28—(28-30 July) Russell N. Boardman and John Polando set a new airline, nonstop, non-refueled distance record by flight of 5,011.8 miles in Bellanca monoplane from Floyd Bennett Field, N. Y., to Istanbul, Turkey.

August

11—Maj. John F. Curry assumed command of Air Corps Tactical School, which had been transferred from Langley Field, Va., to Maxwell Field, Montgomery, Ala.

31—At the National Air Race meet, Cleveland, it was announced that Mrs. Phoebe Omlie won the women's division of the handicap transcontinental derby.

September

26—The keel of the *Ranger*, first aircraft carrier designed and built as such was laid at Newport News, Va.

October

3—Clyde Pangborn and Hugh Herndon, Jr., began the first nonstop flight between Japan and the United States. Flying a Bellanca-PW 420, they landed at Wenatchee, Wash., on 5 October.

December

22—Maj. Gen. B. D. Foulois took oath as Chief of Air Corps.

1932

February

14—Ruth Nichols, in a Lockheed Vega, set new world altitude record for diesel-powered planes, 19,928 feet, at Floyd Bennett Field, N. Y.

May

9—The first blind solo flight (without a check pilot aboard) solely on instru-

ments was made by Capt. A. F. Hegenberger, Air Corps, at Dayton, Ohio, for which he was awarded the Collier Trophy.

20—Amelia Earhart in Wasp-powered Lockheed Vega began the first solo flight across the North Atlantic by a woman.

30—The National Elimination Balloon Race was won by Lt. Wilfred J. Paul and Lt. K. J. H. Bishop, flying a distance of 901.4 miles from Omaha, Nebr., to Hattton, Saskatchewan, Canada, in 29 hours 15 minutes, establishing new distance and duration records for balloons of 35,000 cubic feet capacity.

August

25—Amelia Earhart became the first woman to complete a nonstop transcontinental flight, Los Angeles to New York.

31—Capt. A. W. Stevens and Lt. C. D. McAllister, Air Corps, flew five miles above earth's surface at Fryeburg, Maine, to photograph eclipse of the sun.

September

3—Maj. James H. Doolittle set a new world speed record for land planes by averaging 294 mph over 3-km. course at Cleveland, Ohio, in Granville Gee Bee monoplane with Wasp engine.

21—The intensity of cosmic rays at various altitudes was tested by personnel of 11th Bombardment Squadron in a Condor Bomber in flights from March Field, Calif.

November

14—Roscoe Turner, in a Wedell-Williams, set a new transcontinental east-west record by flight from Floyd Bennett Field, N. Y., to Burbank, Calif., in 12 hours 33 minutes. (Stopped twice en route.)

19—National monument to Wilbur and Orville Wright was dedicated at Kitty Hawk, N. C.

1933

January

2—Orville Wright received the first honorary fellowship of the Institute of Aeronautical Sciences.

April

4—Navy dirigible, *Akron*, crashed into the sea killing 73 people, among them Rear Admiral William A. Moffett, Chief of the Navy's Bureau of Aeronautics.

21—Maiden flight of Navy dirigible *Macon*.

July

15—Wiley Post began the first solo round-the-world flight, flying 15,596 miles in 7 days 18 hours 49 minutes 30 seconds.

November

21—Lt. Comdr. Thomas G. W. Settle, USN, and Maj. Chester L. Fordney, USMC, set a balloon altitude record of 61,237 feet over Akron, Ohio.

December

13—First Air Mail Flyer's Medal of Honor was presented to Mal Bryan Freeburg by President Franklin D. Roosevelt.

1934

February

19—Under Presidential order the Army Air Corps started flying domestic airmail. The assignment continued until 10 March when it was stopped after nine pilots and passengers had been killed.

April

26—Boris Sergievsky set a world seaplane record for greatest load carried to an altitude of 2,000 meters by carrying 16,608 pounds at Bridgeport, Conn.

May

- 17—Boris Sergievsky and Raymond B. Quick, in a Sikorsky S-42 set a United States seaplane altitude record for seaplanes carrying a payload of 5,000 kilograms, 20,406.762 feet, at Bridgeport, Conn.
- 22—The Mackay Trophy for 1933 was awarded to Capt. W. T. Larson for development of procedures of aerial frontier defense involving instrument take-offs and landings on land and sea and instrument flying over water.
- 29—The Collier Trophy for 1933 was awarded to the Hamilton Standard Propeller Company, with particular credit to Frank W. Caldwell for the development of a controllable pitch propeller.

June

- 1—Army Corps airmail operations were terminated.
- 20—Daniel Guggenheim Medal presented to William E. Boeing for his achievements in air transportation and aircraft manufacture.
- 25—Richard C. du Pont set a glider distance record of 158.299 miles from Elmira, N. Y., to Basking Ridge, N. J. in a Du Pont Bowlus sailplane.
- 28—Contract made with Boeing Aircraft Company for design of B-17.

July

- 19—(19 July-20 August) Flight from Bolling Field, D. C., to Fairbanks, Alaska, and return by 10 Martin B-10's, Lt. Col. H. H. Arnold commanding. Distance, 8,290 miles, flying time: Northbound, 25 hours 30 minutes; southbound, 26 hours. Mackay Trophy and DFC awarded to Lt. Col. Arnold.
- 28—A 60, 613-foot altitude was reached in Air Corp-National Geographic Society Balloon Flight by Maj. W. E. Kepner and Capts. A. W. Stevens and O. A. Anderson; all received DFC's.

October

- 9—The Gold Medal of the Federation Aeronautique Internationale was presented to Wiley Post.

November

- 8—Capt. E. V. Rickenbacker, Silas Morehouse, and Capt. Charles W. France flew from Los Angeles to Newark, N. J., in 12 hours 3 minutes 50 seconds, setting a new record for passenger transport.
- 17—Mitchell Trophy Race was won by Capt. Fred C. Nelson, Air Corps, at an average speed of 216.832 mph at Selfridge Field, Mich.
- 20—Lt. Commander E. F. Stone, U. S. Coast Guard, set an international amphibian speed record of 191.734 mph at Hampton Roads, Va.

December

- 31—Helen Richey, first woman aviator to pilot an airmail transport on regular schedule, flew from Washington, D. C., to Detroit, Mich., in a tri-motored Ford 12-passenger transport. She was appointed co-pilot by Central Airlines, Inc.

1935

January

- 3—Antarctic flight by Lincoln Ellsworth and Herbert Hollick-Kenyon.
- 11—(11-12 January) Amelia Earhart, in a Lockheed Vega with Pratt and Whitney Wasp engine, made the first solo flight from Hawaii to California, in 18 hours 16 minutes flying time.
- 15—Maj. James H. Doolittle, with two passengers, flew an American Airlines' plane nonstop from Los Angeles to New York in 11 hours 59 minutes, setting transcontinental record for passenger transport airplanes and nonstop west-east transcontinental record.
- 29—Harry Richman, flying a Sikorsky S-39,

set an amphibian world altitude record of 18,641.676 feet at Miami, Fla.

February

- 12—The USS *Macon* crashed at sea off the coast of California.
- 21—Leland S. Andrews with Henry Meyers, co-pilot, and G. D. Rayburn, radio operator, flew an American Air Lines' plane from Los Angeles to Floyd Bennett Field, N. Y., in 11 hours 34 minutes 16 seconds, setting a transcontinental record for passenger transport airplanes.

March

- 28—Dr. Robert Goddard launched the first rocket equipped with gyroscopic controls. It attained a height of 4,800 feet, a horizontal distance of 13,000 feet, and a speed of 550 mph.

April

- 16—(16-17 April) The Pan American Clipper flew from Alameda, Calif., to Honolulu in 18 hours 37 minutes, in the first test flight for Pan American Airways transpacific commercial air service.
- 19—(19-20 April) Amelia Earhart flew from Burbank, Calif., to Mexico City, with one stop, in 13 hours 32 minutes elapsed time.

May

- 8—Amelia Earhart made the first nonstop flight from Mexico City to Newark, N. J., in 14 hours 19 minutes.
- 31—Hickam Field, near Fort Kamehameha, Hawaii, was dedicated.

July

- 22—The Collier Trophy for 1934 was presented to Capt. Albert F. Hegenberger for development and demonstration of a successful blind landing system.

August

- 15—Will Rogers and Wiley Post were killed in a take-off crash near Point Barrow, Alaska.
- 20—Leslie R. Tower and a crew of 3 flew a Boeing 299 bomber (prototype of B-17) for 2,100 miles from Seattle, Wash., to Dayton, Ohio, nonstop, at average speed of 232.2 mph.
- 24—Three new world speed-with-the-payload seaplane records were established in flights from Langley Field, Va., to Floyd Bennett Field, N. Y., and return, by Brig. Gen. F. M. Andrews in a Martin B-12W bomber with pontoon flotation gear replacing landing wheels.

September

- 13—Howard Hughes, flying Hughes Special at Santa Ana, Calif., set a new international speed record of 352 mph for land planes.

October

- 19—The Mitchell Trophy Race was won by Capt. Karl E. Gimmmler, U.S. Air Corps, who flew 212.96 mph at Selfridge Field, Mich.

November

- 9—U.S. Navy made the first mass seaplane flight from Honolulu to French Frigate Shoals, flying 759 miles nonstop in 6 hours 10 minutes.
- 11—A 72,394.795-foot world altitude record for balloons was made by Cpts. A. W. Stevens and O. A. Anderson, Rapid City, S. Dak., in cooperation with National Geographic Society.
- 22—Beginning of first transpacific airmail flight, by Capt. Edwin C. Musick, Pan American Airways, from San Francisco to Honolulu, Midway Island, Wake Island, Guam, and Manila, in Martin *China Clipper*.
- 23—(23 November-5 December) Lincoln Ellsworth and pilot Herbert Hollich-Kenyon flew approximately 2,100 miles

from Dundee Island, Weddell Sea, Antarctica, to within 25 miles of Little America, Bay of Wales, Ross Sea.

December

- 1—Mass flight of 29 bombardment planes of 7th Bombardment Group started from Hamilton Field, Calif. The planes reached Vero Beach, Fla., in 21 hours 50 minutes.
- 11—The Hubbard Gold Medal of the National Geographic Society was presented to Capt. Albert W. Stevens and Capt. Orvil A. Anderson for their stratosphere balloon ascent of 11 November 1935.
- 12—Lt. Hugh F. McCaffery, U.S. Army, and crew of 5 set amphibian distance record of 1,033.2 miles from San Juan, Puerto Rico, to Chapman Field, Miami, Fla.
- 24—Brig. Gen. Oscar Westover was appointed Chief of Air Corps with rank of Major General.
- 27—Aerial bombardment diverted the Mauna Loa lava flow from waterworks at Hilo, Hawaii.

1936

February

- 11—At Dayton, Ohio, Iona Coppedge and Josephine Garrigus, in Aeronca monoplane, set women's world altitude record of 15,252.579 feet for light airplanes in the third category (multi-seater planes weighing less than 617.288 pounds when empty).
- 19—Ex-Brig. Gen. William Mitchell died in Doctor's Hospital, New York City. He was buried in Milwaukee, Wis.

April

- 14—Boris Sergievsky set an amphibian world altitude record of 24,950.712 feet and world record for amphibians with pay load of 50 kilograms at Stratford, Conn.

June

- 6—The Socony-Vacuum Oil Company, Inc. at Paulsboro, N. J., began production of aviation gasoline (100 octane) by the catalytic cracking method.
- 29—World's airline distance record for amphibians was set by Maj. Gen. Frank M. Andrews and Maj. John Whitely and crew in a Douglas YOA5-2 Wright 800 in flight from San Juan, Puerto Rico, to Langley Field, Va., a distance of 1,429.685 miles.

July

- 3—Henry Ford bought, for Greenfield Village exhibit, the old shop in Dayton, Ohio, where the Wright Brothers invented the airplane.

September

- 4—Louise Thaden and Blanche Noyes won the Bendix Trophy Race and set a women's east-west transcontinental speed record, flying from Floyd Bennett Field, N. Y., to Los Angeles in 14 hours 55 minutes 1 second, in a Beechcraft with Wright Whirlwind engine.
- 10—Regular transatlantic flying boat service launched by Deutsche Lufthansa from Horta, Azores, to Bermuda; in October the service was extended to New York.
- 14—Harry Richman and Henry T. (Dick) Merrill began the return flight of their transatlantic round trip flight between New York and London.

October

- 21—Pan American Airways initiated regular weekly six-day passenger service between San Francisco and Manila.
- 29—Capt. James A. Mollison, British pilot, took off in a Bellanca Flash from Newfoundland, and landed at London 30 October—a distance of 2,300 miles, in 13 hours 17 minutes.

November

- 2—John H. Shobe set a new speed record from New York to Boston, flying a

Beechcraft 190 miles in 50 minutes 30 seconds, at average speed of 227.5 mph.

- 4—The Hawaiian *Clipper* arrived at Alameda, Calif., completing the first regular passenger flight to Manila and return.

December

- 19—Maj. Alexander P. de Seversky set an international amphibian speed record for 100 kilometers at Miami, Fla., by traveling 209.451 mph.

1937

January

- 4—Frank Sinclair flew from New York to New Orleans in record time of 5 hours.
19—Howard Hughes in a Hughes Special flew from Burbank, Calif., to Newark, N. J., in 7 hours 28 minutes 25 seconds, setting a new transcontinental speed record.

March

- 1—First YB-17A, Flying Fortress, delivered to 2d Bombardment Group, Langley Field, Va.
30—Pan American Airways completed 7,000-mile survey flight from Pago Pago to Auckland, New Zealand, in Sikorsky S-42B.

April

- 19—The first letter to encircle the world by commercial airmail was dispatched from New York City. It was routed via San Francisco, Hong Kong, Penang, Amsterdam, and Brazil, and was returned to New York on 25 May 1937.
28—Pan American *Clipper* arrived at Hong Kong, completing the first commercial flight across the Pacific.

May

- 6—The German dirigible *Hindenburg* burned while mooring at Lakehurst, N. J., killing 36 persons.

- 21—Amelia Earhart and Fred Noonan set out from San Francisco on west-east round-the-world flight which ended on July 2 when the fliers disappeared in the Pacific.

June

- 25—First nonstop transcontinental amphibian flight was made by Richard Archbald in a PBY-1 Catalina from San Diego to New York.

July

- 1—Weather service was transferred from the Signal Corps to the Army Air Corps.
20—The first shoulder sleeve insignia was authorized for an independent American air unit—for General Headquarters Air Force.
26—Jacqueline Cochran, flying a Beechcraft, set a women's United States speed record of 203.895 mph for 1,000 kilometer course.

August

- 23—The first wholly automatic landings in history were made at Wright Field by Capt. Carl J. Crane, inventor of the system, Capt. George Holloman, pilot, and Mr. Raymond K. Stout, project engineer. The landing was made without assistance from the human pilot or from the ground. Crane and Holloman were awarded DFC's and the Mackay Trophy.

September

- 19—Roscoe Turner, flying a Laird-Turner Racer, set a United States speed record of 289.908 mph for 100 kilometers at Detroit, Mich.

December

- 3—Maj. A. P. de Seversky flew from New York City to Havana, Cuba, setting a new record of 5 hours 2 minutes 51 seconds.

1938

February

18—The General William E. Mitchell Memorial Plaque for achievements in aeronautics was presented to Jacqueline Cochran for her speed records.

27—The goodwill flight to Buenos Aires of six B-17's under Lt. Col. Robert D. Olds, which had left Miami on 17 February, returned to Langley Field, Va.; flying time: southbound, 33 hours 30 minutes; return, 33 hours 35 minutes. The flight from Miami to Buenos Aires was the longest nonstop mass Air Corps flight to date.

April

22—E. V. Rickenbacker purchased Eastern Air Lines from North American Aviation, Inc., for \$3,500,000.

May

25—Frank W. Fuller, Jr., in a Seversky, flew from San Francisco to Seattle in record time of 2 hours 31 minutes 41 seconds.

June

6—The Daniel Guggenheim Medal for 1938 was awarded to A. H. R. Fedden for "contributions to the development of aircraft engine design and for the specific design of the sleeve valve aircraft engine."

23—President Roosevelt signed the Civil Air Authority Act.

July

10—Howard Hughes, pilot, and a three-man crew began a flight around the world: New York, Paris, Moscow, Omsk, Yakutsk, Fairbanks, Minneapolis, New York—14,791 miles—3 days 19 hours 8 minutes.

18—Douglas (Wrong-Way) Corrigan arrived in Dublin, Ireland, 28 hours 13

minutes after leaving New York in a 9-year-old Curtiss Robin.

28—A 278 mph average speed in transcontinental flight was achieved by Lt. H. L. Neely in a Seversky P-35 in 9 hours 54 minutes flying time. Elapsed time: 11 hours 29 minutes.

August

3—(3-12 August) A goodwill mission from Langley Field, Va., to Bogota, Columbia, made by three B-17's of 2d Bombardment Group under Maj. Vincent J. Meloy.

19—The first transcontinental nonstop flight by a B-18 bomber was made from Hamilton Field, Calif., to Mitchell Field, N. Y., in 15 hours 18 minutes.

22—The Civil Aeronautics Act became effective, coordinating all non-military aviation under the Civil Aeronautics Authority.

29—Maj. Alexander de Seversky set east-west transcontinental speed record of 10 hours 2 minutes 55.7 seconds in a 2,457 mile flight.

September

2—Merrill Phoenix and Howard Allen in a Piper Cub began a flight at Syracuse, N. Y., which set a world light-plane endurance record of 106 hours.

7—17 U.S. Navy planes completed a mass flight from San Diego to Hawaii, 2,570 miles, in 17 hours 21 minutes.

15—A space cabin simulator developed at the School of Aviation Medicine under Dr. Strughold was the forerunner of the enclosed environment of the space ship.

15—Announcement was made of award of the Collier Trophy to Army Air Corps for development of pressurized cabin substratosphere plane.

21—Maj. Gen. Oscar Westover, Chief of the Army Air Corps, was killed in an airplane crash at Lockheed Airport, Burbank, Calif.

22—Maj. Gen. H. H. Arnold was appointed Chief of Air Corps.

27—The first airplane instructor's license issued by the Civil Aeronautics Authority was issued to Arthur J. Banks, Atlanta, Ga.

1939

February

14—A B-15 commanded by Maj. Caleb V. Haynes reached Chile, South America, from Langley Field, Va., in 29 hours 53 minutes flying time, with 3,250 pounds of medical supplies for earthquake victims.

March

- 5—Nonstop airmail system by pickup was demonstrated by Norman Rintoul and Victor Yesulantes in Stinson Reliant at Coatesville, Pa.
- 21—A board of officers, composed of Col. Hugo E. Pitz, Lt. Col. Joseph T. McNarney, Maj. Karl S. Axtator, and Maj. George C. Kenney, was appointed for the purpose of selecting sites for main permanent air base and auxiliary landing fields in Puerto Rico.
- 24—Jacqueline Cochran in Beechcraft plane (Twin Wasp powered) set women's national altitude record of 30,052.43 feet over Palm Springs, Calif.

May

20—The first regularly scheduled transatlantic passenger and airmail service was inaugurated by Pan American Airways.

June

1—Inauguration of the plan to utilize civilian flying schools for the primary training of Air Corps flying cadets.

July

4—Lt. Robert M. Stanley, USN, set American altitude record for singleplace gliders when he soared to 17,263.743 feet at Elmira, N. Y.

30—The United States regained world record for payload-carrying when Maj. C. V. Haynes and Capt. W. D. Old flew the Army Boeing B-15 to 8,200 feet with payload of 15½ tons, at Wright Field, Ohio.

August

- 26—A B-17A, with Maj. Charles M. Cummings and Stanley Umstead as pilot and co-pilot respectively, flew 1,200 miles from Miami to the Panama Canal Zone in 6 hours. The flight indicated the speed with which reinforcements could be rushed to protect the Canal.
- 30—The Pan American Airways' *California Clipper* landed at Auckland, New Zealand, completing first flight of fortnightly service from San Francisco.

October

- 12—Harry B. Chapman, in an Aeronca seaplane, established a world distance record for light seaplanes in a 1,163.8-mile flight from Jamaica Bay, N. Y., nonstop to New Orleans.
- 13—Evelyn Pinckert Kilgore, San Bernardino, Calif., became the first woman to receive an airplane instructor's license under the CAA.

November

7—The Mackay Trophy for 1938 was awarded to 2d Bombardment Group for 10,000-mile flight from Miami to Buenos Aires, Argentina, and return to Langley Field, Va.

December

16—Maj. Gen. Delos C. Emmons was made commander of General Headquarters Air Force at Langley Field, Va.

1940

January

23—In the first American test of the practicability of moving a complete troop

unit by air, a battalion of 65th Coast Artillery was transported 500 miles by 38 bombers of the 7th Bombardment Group, Hamilton Field, Calif.

February

- 26—The War Department created the Air Defense Command to integrate defenses of the United States against air attack. The command, primarily a planning agency, was located at Mitchel Field, N. Y., and was under Brig. Gen. James E. Chaney, who assumed command on 15 March 1940.

March

- 9—D 17A Beechcraft biplane piloted by T/Sgt. T. A. Petras, U.S. Marine Corps, flew to altitude of 21,050 feet (believed to be a record altitude above the Antarctic continent) to measure cosmic rays for U.S. Antarctic Expedition.
- 25—Air Corps contractors were authorized to sell modern types of Army combat airplanes to anti-Axis governments, under a "liberalized release policy," as a means for expanding future Air Corps production facilities.
- 26—United States commercial airlines completed a full year of flying without a fatal accident or serious injury to a passenger or crew member.

April

- 8—A B-18 made the first recorded nonstop flight from Denver to Miami.
- 14—The first Air Corps detachment assigned to an Alaskan station arrived at Fairbanks, Alaska.
- 25—The aircraft carrier *Wasp* was commissioned.

May

- 16—President Roosevelt called for production of 50,000 planes a year.
- 23—(23-25 May) The first demonstration of complete military maneuvers simulating European combat operations was held

at Barksdale Field, La., by 320 Army aircraft during Third Army maneuvers.

July

- 8—Three Air Corps Training Centers were established; Randolph Field, Tex., Maxwell Field, Ala., and Moffett Field, Calif.
- 8—Beginning of the first commercial flight of the Boeing 307-B Stratoliner, Burbank, Calif., to Long Island, N. Y. This was also the first commercial flight to use a pressurized cabin.
- 12—Pan American Alaskan *Clipper*, a Sikorsky S-42B, made the first flight from the United States to Alaska (Seattle-Juneau).
- 12—Pan American made the first airmail delivery to Auckland, New Zealand, over new route connecting the United States with Australia by way of Honolulu, Canton Islands, and New Caledonia. Passenger service over this same route began on 11 September 1940.
- 16—First bombardier training in Air Corps Schools was begun at Lowry Field, Colo., with the entrance of the first class of bombardier instructors.

September

- 1—Pan American Airways inaugurated a new three-day route from the United States to Rio involving a 1,500-mile shortcut across Amazon jungles.
- 2—Agreement was made whereby the United States transferred 50 over-age destroyers to Great Britain in exchange for air and naval bases at 8 strategic points in the Atlantic and Caribbean areas.

November

- 1—The Hawaiian Air Force was activated at Fort Shafter, T. H.
- 10—GHQ Air Force was removed from jurisdiction of the Chief of Air Corps and, as an element of the field forces, was placed under the command of the general commanding the field forces.

1941

January

- 11—Army Air Corps announced the control of robot planes, either by radio from the ground or from another plane, had been tested successfully.

March

- 17—Milwaukee renamed its airport General Mitchell Field.
26—Air Districts were redesignated as Air Forces: Northeast as First, Northwest as Second, Southeast as Third, and Southwest as Fourth.
26—The Air Corps Technical Training Command was established.
27—Base-Lease Agreement signed by United States and Great Britain leasing eight air and naval bases in the British Atlantic and Caribbean possessions in return for United States destroyers; this implemented the 2 September 1940 agreement.

April

- 1—The United States and Mexico signed an agreement providing for reciprocal transit of military aircraft through the territory of the two countries.
9—United States-Danish agreement gave the United States the right to construct and operate airfields in Greenland.
15—Igor Sikorsky piloted a Vought-Sikorsky in the first officially recorded rotor helicopter flight in the western hemisphere; flying time, 1 hour 5 minutes 14.5 seconds; at Stratford, Conn.

May

- 13—21 B-17D's took off from Hamilton Field, Calif., in the first mass flight of bombers over the Pacific; they landed at Hickam Field, Hawaii, 13 hours and 10 minutes later, on 14 May.
28—A spinproof private plane, designed for General Aircraft Company, was demonstrated in Newark, N. J.

- 31—Maj. Gen. George H. Brett was appointed Chief of the Air Corps.

June

- 3—The grade of aviation cadet was created.
20—Establishment of the Army Air Forces, comprising the Office of the Chief of Air Corps and the Air Force Combat Command (formerly GHQ Air Force), with Maj. Gen. H. H. Arnold named as Chief of Army Air Forces.

July

- 1—The first AAF oversea air transport services opened with flight of B-24 piloted by Lt. Col. C. V. Haynes from Bolling Field, D. C., to Scotland, via Montreal and Newfoundland.

August

- 12—The first successful rocket-assisted take-off of an airplane in this country took place on 12 August 1941.
18—President Roosevelt announced agreements by which Pan American Airways would ferry war planes from the United States to British forces in the Middle East via West Africa.

September

- 5—Mass transpacific flight of heavy bombers was begun by nine B-17D Flying Fortresses, which left Hawaii for the Philippines, flying by way of Midway, Wake, Port Moresby, and Darwin, Australia. They landed at Clark Field, near Manila, on 12 September.
11—Glenn L. Martin Company displayed at Baltimore a 70-ton four-engine Navy flying boat with a 200-foot wing spread—said to be the largest in the world.
17—Parachute troops were used for the first time in an American tactical exercise when paratroopers were dropped during Louisiana maneuvers.
29—First class began training in heavy bombardment crew school.

October

- 24—Arthur J. Starnes, near Chicago, set a new record for free fall by dropping from 30,800 feet to 1,500 feet in 116 seconds before opening his parachute.
- 30—Maj. Alva L. Harvey completed a record-making flight around the world in a B-24. The trip included a 3,150-mile nonstop flight from Great Britain to Moscow on which personnel of the Har-ri-man Mission were carried. The distance covered was 24,700 miles in 17 days elapsed time.

November

- 7—First flight of the GB-1 guided glide bomb, containing preset guidance.
- 12—First launching of an experimental GB-8 glide bomb, incorporating radio controls.

December

- 1—An Executive Order established the Civil Air Patrol.
- 2—First world flight by a commercial air-plane was made by *Pacific Clipper* of Pan American Airways. It left San Francisco 2 December and landed in New York City 6 January 1942, having covered 31,500 miles in 209 hours 30 minutes flying time.
- 7—The Japanese bombed Pearl Harbor.
- 12—Maj. Gen. H. A. Dargue, pioneer flier, was killed when the plane in which he was riding struck the side of a mountain in the Sierra Nevadas, near Bishop, Calif.
- 18—Lt. "Buzz" Wagner, USAAF, became the first American ace of World War II by shooting down his fifth Japanese plane over the Philippines.

1942

January

- 28—Headquarters and Headquarters Squadron of the Eighth Air Force were acti-

vated at Savannah AAB, Ga., with Col. Asa N. Duncan as commanding officer. (Exactly 3 years later, in England, the Eighth observed its third birthday with a 1,000-plane raid on the Reich. In its 3-year history the Eighth had flown more than 250,000 bomber and 210,000 fighter sorties, dropped 518,000 tons of bombs, and destroyed about 13,000 planes.)

February

- 22—The first American air headquarters in Europe in World War II, the U. S. Army Bomber Command, USAFBI, was established under the command of Brig. Gen. Ira C. Eaker.

March

- 6—The first U. S. Army Air School for negroes, at Tuskegee, Ala. graduated its first class.
- 9—Reorganization of the War Department into three autonomous forces: the Army Air Forces, the Ground Forces, and Services of Supply.
- 27—U. S. War and Navy Departments announced jointly that Navy would have sole command of antisubmarine warfare off east and west coasts of the United States with authority over Army air patrol units.

April

- 2—The first combat mission of the Tenth Air Force, a strike by three heavy bombers against shipping near Port Blair, led by Maj. Gen. Lewis H. Brereton.
- 12—A formation of 3 B-17's and 10 B-25's, led by Brig. Gen. Ralph Royce, attacked Japanese shipping and installations in the Philippines. These planes, based at Darwin, Australia, staged at Mindanao, Philippine Islands, (4,000 miles round trip).
- 18—Doolittle Raid on Tokyo by 16 B-25's, led by Lt. Col. James H. Doolittle, USAAF. The planes took off from the carrier *Hornet*.

May

- 18—An agreement was signed by the United States and Panama providing for the loan of defense sites in Panama, including a number of air bases for use in defense of the Canal.

June

- 3—AAF units participated in the opening phases of the Battle of Midway.
12—Twelve B-24's bombed the Ploesti oil refineries in the first AAF blow against a strategic target in the Middle East.
18—Maj. Gen. Carl Spaatz assumed command of the Eighth Air Force in England.
23—The first flights under BOLERO (build-up of the U. S. Air Forces in Europe) left Presque Isle, Maine, for England.

July

- 4—The first AAF combat bomber mission over Europe in World War II was flown against 4 airdromes in Holland by 6 crews of the 15th Bombardment Squadron (S) in American-built Bostons belonging to the RAF.
7—A B-18 of the 396th Bombardment Squadron attacked and sank a German submarine off Cherry Point, N. C., in the first sure "kill" off the Atlantic coast by aircraft.

August

- 17—First American heavy bomber mission in Europe in World War II was flown by 12 B-17's of 97th Bombardment Group against Rouen-Sotteville yards in France.
20—The Twelfth Air Force was activated at Bolling Field, D. C., in preparation for invasion of North Africa.

September

- 1—First airborne engineering unit, the 871st Airborne Engineers, was activated at Westover Field, Mass.

- 6—VIII Bomber Command lost its first aircraft in combat when two B-17's failed to return from a strike on the Avions Potez aircraft plant at Meaulte, France.

- 12—In the first demonstration of the parafrag bomb in World War II, the 89th Attack Squadron bombed Buna airstrip, New Guinea.

- 15—The first American infantrymen to reach New Guinea (126th Inf. Regiment) landed at Seven-mile airdrome by transport planes.

- 23—Brig. Gen. James H. Doolittle assumed command of the Twelfth Air Force.

- 29—Eagle squadrons, composed of American flyers serving with the RAF, were formally taken over by the VIII Fighter Command and organized into the 4th Fighter Group.

October

- 2—The first flight by turbojet aircraft in the United States was made at Muroc, Calif., by Bell P-59A with General Electric I-A engine.

- 21—B-24's of India Air Task Force bombed mines near Kuyeh in first offensive mission of the AAF north of the Yellow River.

- 21—The VIII Bomber Command flew its first mission against the German submarine bases with 66 B-17's and 24 B-24's attacking Lorient-Keroman, dropping 30 tons of bombs.

- 25—American bombers raided Japanese-occupied Hong Kong and damaged the Kowloon docks in the first raid on the former Dutch crown colony since Japanese occupation.

November

- 12—The Ninth Air Force was established in the Middle East.

- 12—Last of the 77 P-40's of the 33d Fighter Group were catapulted from the carrier *Chenango*. They landed at Port Lyautey (Morocco) airfield. The operation had started on 10 November.

- 15—Lts. Harold Comstock and Roger Dyar

set a new speed record for airplanes when they power-dived their P-47 fighters at 725 mph from 35,000 feet over an east coast air base.

- 28—Nine B-24's of 7th Bombardment Group flew a 2,760-mile round trip mission from Gaya, India, to bomb Bangkok, in the first USAAF attack on Japanese-held Thailand.

December

- 15—Nine B-24's of the 376th Bombardment Group bombed Sfax in the opening phase of the Ninth Air Force's campaign against Tunisian ports.
- 22—The first full-scale air attack on an enemy base in the Central Pacific was made by 26 B-24's of the 307th Bombardment Group, which staged through Midway to bomb Wake.
- 28—Capt. Robert Oliver Daniel Sullivan, first aviator to fly 100 times across the Atlantic Ocean, completed his 100th trip, flying from New York to Portugal. His first flight was 28-29 January 1938, New York to Marseilles, France.
- 29—The Collier Trophy was given jointly to the AAF and the private air lines of the nation.

1943

January

- 5—Allied Air Forces in Northwest Africa were activated under command of Maj. Gen. Carl A. Spaatz.
- 14—Opening of the Casablanca Conference, at which plans for combined bomber offensive against Germany were established.
- 17—B-17's from Henderson Field (Guadalcanal) dropped water, ammunition, and rations to forward troops near Mt. Austen.
- 27—First American bombing of Germany took place when B-17's of 1st Bombardment Wing, Eighth Air Force, attacked Wilhelmshaven and Emden.

February

- 1—Maj. Gen. N. F. Twining, Commanding General, Thirteenth Air Force, and 14 companions were rescued by PBY's near New Hebrides Islands, after having ditched on a flight from Guadalcanal to Espiritu Santo, and having spent 6 days in life rafts.
- 17—The Mediterranean Air Command was activated under the command of Air Chief Marshal Sir Arthur Tedder with three subordinate commands: Northwest African Air Forces (Maj. Gen. Carl Spaatz), Middle East Air Command (Air Chief Marshal Sir Sholto Douglas), and RAF Malta Air Command (Air Vice Marshal Sir Keith Park).

March

- 4—End of the Bismarck Sea action, in which a major Japanese effort to reinforce Lae was turned back by aircraft of the Southwest Pacific Air Forces. Over 40,000 tons of Japanese shipping was sunk and between 50 and 60 enemy planes were destroyed.
- 10—The Fourteenth Air Force was activated under the command of Maj. Gen. Claire Chennault.

- 26—The First Air Medal awarded to a woman was presented to 2d Lt. Elsie S. Ott, ANC, who served as nurse for five patients evacuated from India to Washington, D. C.

April

- 5—Operation FLAX, a concentrated attack on the Axis air transport service between Italy and Tunisia via staging airbases in Sicily, was begun by planes of the Northwest African Air Forces and resulted in claims of 201 enemy planes destroyed.
- 17—The Eighth Air Force made its first 100-plane attack on a single target, against Bremen, Germany.

1943

20—Seventh Air Force made first attack on Tarawa with B-24's staging from Funa-futi (Ellice Islands).

22—Lt. Stewart of the 76th Fighter Squadron and Lt. Chin Hao of the Chinese Air Force reconnoitered Lashio, Burma, in one of the first operational missions in which Chinese and American personnel flew together.

May

3—Lt. Gen. Frank M. Andrews, Commanding General, European Theater of Operations, U. S. Army, was killed in an air crash in Iceland.

June

11—The Pantelleria garrison surrendered without firing a shot, becoming the first large defended area to be conquered by air power.

24—Lt. Col. William R. Lovelace, made a record parachute jump of 40,200 feet, near Ephrata, Wash.

25—130 B-17's in the heaviest single attack made to date by Northwest African Air Forces, dropped more than 300 tons of bombs on Messina, Sicily.

July

2—Lt. Charles Hall became the first United States negro flier to shoot down an Axis plane, a German Focke-Wulf 190 over Sicily.

8—Col. Malcolm G. Grow, Surgeon, Eighth Air Force, received Legion of Merit for developing a "flak vest" and steel helmet to deflect low velocity missiles from American airmen.

10—Allied airborne troops landed at Gela and Syracuse, Sicily, in the first large scale airborne operation attempted by the Allies in World War II.

August

1—Mediterranean-based B-24's executed a low-level attack on the Ploesti oil refineries in Rumania in the first large

scale minimum-altitude attack by AAF heavy bombers upon a strongly defended target; it was the longest major bombing mission in terms of distance from base to target undertaken to date.

13—The Northwest African Strategic Air Force bombed Wiener Neustadt in the first mission from Italian bases against targets in greater Germany.

21—The first Los Angeles-New York freight service was inaugurated.

26—London disclosed that the AFF was using new type perspective maps with targets drawn as seen from the air, to improve its high altitude precision bombing.

27—10 SB-24's ("Snoopers") equipped with special radar sighting devices which made accurate bombing possible, irrespective of visual sighting, began operations from Carney Field, Guadalcanal.

September

13—Over 1,200 paratroopers of the 82d Airborne Division were dropped on the Salerno, Italy, beachhead by the 52d Troop Carrier Wing without the loss of a man or a plane.

27—In attacks by U. S. B-17's on targets at Emden, approximately 1,000 tons of bombs were dropped in the heaviest assault on a single target to date. Escorting P-47 fighters set a distance record by flying more than 600 miles on the mission.

October

9—British Air Chief Marshal Portal declared that the bombing of the Focke-Wulf plant at Marienburg by U. S. B-17's was "the most perfect example of accurate distribution of bombs."

16—The Ninth Air Force was reorganized in England as the tactical arm of the U. S. Army Air Forces in the European Theater of Operations; Maj. Gen. L. H. Brereton assumed command.

16—The Remington Arms Company announced new-type incendiary ammunition.

tion to pierce self-sealing fuel tanks and cause explosions.

22—Maj. R. C. Heffner received the DFC for pioneer flights establishing air routes across Africa and the Middle East.

31—38 B-17's bombed France for the first time from the Mediterranean Theater, striking Antheor Viaduct near Cannes.

November

2—74 B-17's and 38 B-24's, in the first mission of the newly formed Fifteenth Air Force, dropped 327 tons of bombs on aircraft factories at Wiener Neustadt, flying 1,600 miles round trip.

11—The Fifth and Thirteenth Air Forces made their first joint attack on Rabaul in cooperation with Naval carrier planes.

13—Allied planes carried out their heaviest raid on a New Guinea target when 57 B-24's and 62 B-25's bombed Alexishafen and Madang airdromes.

14—First AAF attack on Bulgaria was carried out by 90 B-25's of the Twelfth Air Force which dropped 135 tons of bombs on Sofia.

25—The first Fourteenth Air Force mission against Formosa was flown from bases in China by B-25's, P-38's, and P-51's.

27—XX Bomber Command was activated at Smoky Hill Army Air Field, Salina, Kans.

29—First American raid was made on Sarajevo, Yugoslavia, historic city of World War I; 25 B-25's of the Twelfth Air Force hit military installations and rail facilities.

December

1—Igor Sikorsky received the Worcester Reed Warner Medal for creative engineering, especially in aeronautics.

2—U. S. Navy announced acceptance for the Naval Transport Service of the world's largest flying boat, the 70-ton Martin *Mars*.

10—Secretary of the Navy, Frank Knox, disclosed that the flying boat *Mars*, re-

cently delivered, had flown 8,972 miles on a round trip from the United States to Natal, Brazil. It set records for weight of cargo (35,000 pounds) and for the longest overwater trip—4,375 miles from Patuxent, Md., to Natal.

17—Orville Wright presented the Collier Trophy to his former pupil, Gen. H. H. Arnold, CG, AAF, for outstanding achievement in aviation in 1943.

24—The first major Eighth Air Force assault on German V-weapon sites was made when 670 B-17's and B-24's bombed the Pas de Calais area.

26—Pre-invasion bombing of Cape Gloucester (New Britain) completely destroyed enemy defenses; Fifth Air Force adopted the term "Gloucesterizing" to describe complete destruction of a target.

1944

January

1—United States Strategic Air Forces in Europe (USSTAF) were activated.

6—Lt. Gen. Carl Spaatz assumed command of United States Strategic Air Forces in Europe, and Maj. Gen. James H. Doolittle assumed command of the Eighth Air Force.

22—1,200 sorties by Mediterranean Allied Air Force planes supported the ground forces as they hit the beaches at Anzio.

29—In the largest United States air operation to date, 800 heavy bombers of the Eighth Air Force, dropped 1,886 tons of bombs on Frankfurt, Germany.

February

3—About 1,200 U.S. B-17's, B-24's, and escort fighters attacked Wilhelmshaven and Emden, Germany.

9—More than 250 bombers and fighters, one of the largest forces ever to operate from Allied bases in the Solomons to date, raided Rabaul, New Britain.

15—Medium and heavy bombers made a 254-plane attack on the Abbey of Monte Cassino, Italy, ahead of Fifth Army.

- 20—Opening mission of "Big Week"—six days of strikes by Eighth Air Force and Fifteenth Air Force against German aircraft plants and targets.
- 25—The final missions of "Big Week."
- 29—Fifth Air Force bombers put both of the Japanese air bases at Alexishafen, New Guinea, out of operation.
- 29—Fifth Air Force supported the first landing made in the Admiralty Islands, which completed the isolation of Rabaul.

March

- 5—Brig. Orde C. Wingate's Special Force was landed at Broadway (North Burma) in a night glider operation.
- 6—In the first *major* USAAF attack on Berlin, 660 heavy bombers unloaded 1,600 tons of bombs.
- 16—First land-based air attack on Truk, Caroline Islands, by 11 Seventh Air Force B-24's flying from Kwajalein.
- 25—First operational use of VB-1 Azon vertical bomb, by Fifteenth Air Force against Avisio Viaduct, successfully closing the Brenner Pass. Subsequently Azon employed in ETO (June 1944) and, most successfully, in CBI (Nov 1944-Aug. 1945).
- 28—The Fifteenth Air Force flew its first "thousand ton" raid, striking communications targets in Italy in support of Operation STRANGLE, designed to shut off logistical support to German troops in central Italy.

April

- 3—First heavy air attack on Budapest by 375 Mediterranean Allied Air Force B-17's and B-24's.
- 4—The Twentieth Air Force was activated in Washington, D. C.
- 4—First United States air attack on Bucharest, Rumania, by Italy-based bombers of the Fifteenth Air Force.
- 25—The first land plane attack on Guam was made by Seventh Air Force B-24's from Eniwetok; Navy PBY's went along on a photo reconnaissance mission.

May

- 10—The Chengtu Project (construction in China of 5 VHB bases and 6 fighter fields) was completed. Begun in January, the task was accomplished by 400,000 coolies using the most primitive methods.
- 11—End of Operation STRANGLE (19 March-11 May), in which MAAF's operations against enemy lines of communication in Italy totaled 50,000 sorties, dropping 26,000 tons of bombs.
- 31—First launching of the experimental VB-7 vertical bomb, incorporating television.

June

- 2—The first shuttle bombing mission utilizing the Soviet Union as eastern terminus. Lt. Gen. Ira C. Eaker, head of the Mediterranean Allied Air Forces, flew in one of the B-17's.
- 6—D-day effort of the U.S. Air Forces was unprecedented in concentration and size with Allied aircraft flying approximately 15,000 sorties.
- 13—The first German V-1's fired in combat were launched from France against England with 4 of the 11 striking London.
- 15—The first B-29 strike was made against Japan; 47 B-29's of XX Bomber Command, flying from bases in Chengtu, China, area, struck Yawata.

July

- 22—The first all-fighter shuttle raid was made by Italy-based U.S. Lightnings (76) and Mustangs (58) of the Fifteenth Air Force which attacked Nazi airfields in Rumania at Bazau and Zilistea, northeast of Ploesti. The planes landed at Russian bases.
- 25—Over 2,400 bombers attacked German positions in front of the American lines at St. Lo over a 3-hour period.

August

- 4—The first APHRODITE mission (radio controlled aircraft carrying 20,000

pounds of TNT) was flown against rocket sites in the Pas de Calais area.

- 13—Two GB-4 glide bombs, incorporating television and radio control, launched against E-boat pens at LeHavre, France. Four additional GB-4's were sent against targets in France and Germany between 17 Aug and 13 Sep 1944.
- 15—In the greatest one-day effort in the Mediterranean to date, Mediterranean Allied Air Forces flew 4,249 sorties including the landing of 9,000 airborne troops in Southern France.

September

- 10—The first airplane designed in World War II exclusively to carry cargo, the C-82 was successfully test-flown at the Fairchild aircraft plant, Hagerstown, Md.
- 14—Successful flight into hurricane for scientific data was made by Col. Floyd B. Wood, Maj. Harry Wexler, and Lt. Frank Reckord in Douglas A-20.
- 17—Operation MARKET began when 1,546 Allied aircraft and 478 gliders carried parachute and glider troops in an airborne assault between Eindhoven and Arnhem in Holland with object of securing the Rhine crossing at Arnhem.

October

- 27—The first American air unit to be based in the Philippine Islands since 1942, the 9th Fighter Squadron flew its first mission from Tacloban airstrip.

November

- 1—An F-13 became the first United States plane to fly over Tokyo since April 1942.
- 6—Allied Supreme Headquarters in France announced formation of the First Tactical Air Force (Prov), composed of American and French aircraft.
- 10—36 B-25's of the Fifth Air Force attacked a Japanese convoy near Ormoc Bay and sank 3 ships.
- 16—In the largest air-ground cooperative effort to date over 4,000 Allied planes dropped more than 10,000 tons of bombs

in front of the First and Ninth Armies in preparation for a ground attack.

- 17—Land-based American fighters appeared over Manila, Bataan, and Corregidor for the first time since early 1942.
- 24—First very heavy bomb strike on Tokyo and first bombing mission of XXI Bomber Command against Japanese home islands was flown by 88 B-29's from the Marianas.

December

- 6—Roy W. Howard, president of the Scripps-Howard newspapers, received the Frank M. Hawks Memorial Award in New York, from Air Service Post 501 of the American Legion, for outstanding aid and cooperation in the development of aviation.
- 17—Maj. Richard Bong shot down his 40th enemy plane in the Pacific.
- 21—Gen. H. H. Arnold became General of the Army, the first airman to hold this rank.

1945

January

- 6—45 B-29's from Chengtu bombed the Amura aircraft plant and enemy installations, and targets of opportunity in occupied China.
- 7—Far East Air Forces supplemented Third Fleet air attacks on enemy airfields in northern Luzon with the largest coordinated mission of light and medium bombers (132) to date in the Southwest Pacific Area.
- 9—AAF participated in opening of Luzon, Philippine Campaign.
- 14—China-based B-29's bombed enemy air installation on Formosa with 54 Superforts, hitting the important airfield at Kagi.
- 17—The last B-29 mission from Chengtu, China, airfields, with 91 Superforts airborne against the enemy airfield at Shinchiku, Formosa.
- 28—Clark Field, Philippines, was retaken by American forces.

February

- 3—Largest raid, to date, against Berlin by American bombers: 959 B-17's.
- 5—Despite poor flying conditions 589 heavy bombers of the Fifteenth Air Force, with 225 escorting fighters, flew over the Alps to drop 1,100 tons of bombs on the Regensburg oil storage plant.
- 16—Troop carrier C-47's dropped 2,065 paratroopers on Corregidor after combating a heavy air bombardment of enemy guns and positions.
- 20—The Secretary of War approved plans for the establishment of the White Sands Proving Ground, a rocket-firing installation.
- 21—U.S. Thunderbolts attacked Berchtesgaden, Germany, for the first time, striking mainly at the railroad station. Hitler's retreat was not bombed.
- 22—The Eighth and Fifteenth Air Forces began an all-out assault on German communications under Operation CLARION.
- 26—Lt. Gen. Millard F. Harmon was lost at sea while on a flight in the Pacific.
- 18—1,250 U.S. bombers escorted by 670 fighters gave Berlin its heaviest daylight attack of the war, dropping 3,000 tons of bombs on transportation and industrial areas.
- 24—Allied airborne forces landed across the Rhine near Wesel in Operation VARSITY; total of 7,000 aircraft sorties.
- 24—The Fifteenth Air Force, flying from southern Italy, bombed Berlin for the first time when approximately 150 B-17's dropped 357 tons of bombs on industrial targets.
- 27—In a move to close the Shimonoseki Strait, Japan, to shipping, 105 B-29's of the XXI Bomber Command dropped mines in the area; most of the planes carried 12,000-lb. loads.
- 30—26 B-29's completed the final mission of the XX Bomber Command from the India bases in a strike on Bukum Island, near Singapore.

March

- 9—In a change of tactics which doubled the bomb load, Twentieth Air Force sent more than 300 B-29's from the Marianas against Tokyo in a low-altitude, incendiary, night raid, destroying about one-fourth of the city.
- 11—The greatest weight of bombs dropped in a USAAF strategic raid on a single target in Europe fell on Essen where 1,079 bombers released 4,738 tons.
- 14—Italy-based American bombers cooperated directly with the Red Army in attacks on tactical targets, selected by the Russians, in Austria, Hungary, and Yugoslavia.
- 15—Italy-based heavy bombers of the Fifteenth Air Force flew their longest mission of the war; an attack on the synthetic oil plant at Ruhland, Germany.
- 17—A total of 307 B-29's dropped 2,300 tons of incendiaries on Kobe, Japan.
- 4—A YR-4 helicopter of the Tenth Air Force Air-Jungle Rescue Detachment landed in enemy territory in Burma and successfully evacuated the survivor of a PT-19 crash.
- 7—The first fighter-escorted missions by B-29's against Japan.
- 10—About 50 German jet aircraft shot down 10 American bombers in the Berlin area, the largest loss of the war to jets in a single mission.
- 25—The last Eighth Air Force attack on an industrial target: 274 escorted heavy bombers dropped 500 tons on Skoda Works at Pilsen, Czechoslovakia.

April

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May

- 16—Fighter bombers began assault on the Ipo Dam area (Luzon) in the largest mass employment of napalm in the Pacific War.

June

- 9—A total of 110 B-29's completed a precision attack on aircraft factories at Nagoya, Osaka, and Kobe, Japan.

July

- 14—A-20's from Hollandia set fire to Japanese oil fields at Boela, Ceram, in the first use of rocket bombs in the Southwest Pacific.
- 16—The U. S. Army Strategic Air Force in the Pacific was established under the command of Gen. Carl Spaatz.
- 16—Maj. Gen. Curtis LeMay assumed command of the Twentieth Air Force.

August

- 1—In the largest B-29 combat effort of any one day, 851 Superforts were airborne in strikes on 4 urban areas, a petroleum plant, and 5 mine fields.
- 6—The atomic bomb was dropped on Hiroshima from B-29 *Enola Gay*, under command of Col. Paul W. Tibbets, Jr.
- 9—The second atomic bomb was dropped on Nagasaki from *The Bock's Car* B-29 commanded by Maj. Charles W. Sweeney.
- 10—A total of 95 B-29's carried a record average bomb load of 20,648 pounds per plane in a strike on Amagasaki, Japan.
- 12—The Tenth Air Force on mission from bases in China attacked troops and convoys in the Changsha corridor, China.
- 14—The last bombing mission of the Twentieth Air Force included a record number of effective aircraft (745 B-29's and 169 fighters); one phase of the mission, against Tsuchizaka, was the longest unstaged mission of the war from the Marianas (3,650 miles).
- 27—B-29's completed their first supply dropping operation to Allied POW's with a mission to the Weihsien camp near Peiping, China.

September

- 3—An Air Transport Command C-54 Skymaster, commanded by Maj. G. E. Cain, and carrying films of the formal Japanese surrender, set a new flight record of 31 hours 25 minutes between Tokyo and Washington.

- 26—The Navy, at Naval Air Station, Anacostia, D. C., demonstrated the Ryan Fireball FR-1, the first partially jet-powered airplane designed for aircraft carriers.
- 26—In a series of firing tests at White Sands Proving Ground, N. Mex., between 26 September and 25 October, a WAC corporal attained a height of 43.5 miles.

October

- 4—The first Skymaster round-the-world flight was completed by the Army Air Transport Command when a Douglas C-54 landed in Washington. The flight covered 23,279 miles in 149 hours 44 minutes, including ground time of 33 hours and 21 minutes.
- 6—Norway and the United States agreed on a reciprocal civil air transport pact giving each nation the right of transit and nontraffic stop along standard lines in each country.
- 20—Three B-29's commanded by Lt. Gen. N. F. Twining landed in Washington after blazing a new trail from Guam via India and Germany. Flying time was 59 hours 30 minutes for the 13,167 miles.
- 24—An American Airlines' plane arrived at Hurn Airfield, England, from New York City in 14 hours 5 minutes flying time, to complete the first land-plane commercial flight from North America to Europe.
- 26—Curtiss Wright Research Laboratory announced that special supersonic flying devices, built for the Government, had attained speeds of 1,400 miles an hour. The devices did not depend on propellers or atomic energy for power.

November

- 6—The first jet propelled landing on an aircraft carrier was made by Ensign Jake C. West, USN, in an FR-1 Navy turbojet and conventional reciprocating engine fighter, using jet power to land on the carrier *Wake Island*.

1946

- 7—Bell Aircraft Corporation announced successful test flights of a jet-propelled P-59 by remote control; television was used to read the instruments.
- 20—A world nonstop, non-refueling distance record of 8,198 miles was set by a B-29 which flew from Guam to Washington, D. C., in 35 hours 5 minutes.
- 26—A TWA Lockheed Constellation broke the west-east transatlantic commercial record by flight of 2,000 miles from Gander, Newfoundland, to Rhineanna, Ireland, in 6 hours 45 minutes.

December

- 3—The 412th Fighter Group, first USAAF jet fighter unit, received its first P-80 aircraft at March Field, Calif.
- 4—TWA Lockheed Constellation set a commercial record of 12 hours 57 minutes in its first flight from Washington to Paris.
- 9—First Stratovision flight test made at Middle River, Md., by Westinghouse Electric Corporation and Glenn S. Martin Company. Telecasts were made from the airplane flying in the stratosphere. William Smith was the test pilot.
- 11—B-29 *Dreamboat*, piloted by Col. Clarence S. Irvine, averaged 450 mph in setting a new record of 5 hours 27 minutes 8 seconds for a 2,464-mile flight from Burbank, Calif., to New York.
- 17—President Truman presented the 1945 Collier Trophy to Gen. Carl A. Spaatz for "demonstrating the air power concept" in the European war.
- 30—Republic Aviation Corporation revealed development of XF-12, a 4-engine flying photo laboratory, for the Air Technical Service Command.

1946

January

- 10—An Army R-5, demonstrated by C. A. Moeller and D. D. Viner, set an un-

official world helicopter record by climbing to 21,000 feet at Stratford, Conn.

- 14—A Pan American Constellation set a speed record by flying 675 miles from New York to Bermuda in 2 hours 22 minutes.
- 20—A Pan American Airways Constellation clipper set a commercial plane record for the New York-Libson flight by covering the 3,425 miles in 9 hours 58 minutes.
- 21—In State of the Union report to Congress, President Truman asked for unification of armed services.
- 24—Gen. Carl A. Spaatz was named AAF Chief by President Truman, to succeed Gen. H. H. Arnold.
- 26—The Army announced creation by AAF of the First Experimental Guided Missiles Group to develop and test this type of weapon. The Group was activated at Eglin Field, Fla.
- 26—Col. William H. Councill flew an Army P-80 nonstop from Long Beach, Calif., to La Guardia Field, N. Y., in 4 hours 13 minutes 26 seconds, to break transcontinental record; average speed was 584 mph.
- 30—Announcement was made by Maj. Gen. Curtis E. LeMay that a more advanced aeronautical engineering school would be established at Wright Field, Ohio. He also urged building a \$300,000 wind tunnel for testing supersonic aircraft.

February

- 3—The AAF disclosed in Columbus, Ohio, the development of a plane with automatic devices to pre-set take-off, flight, and landing, with the pilot doing nothing except monitoring the equipment.

March

- 1—General Carl Spaatz was designated Commanding General, Army Air Forces.
- 8—CAA granted the first commercial license for a helicopter; license NC-1H

was issued for the Bell Model 47 two-place helicopter.

- 12—Army Air Forces School redesignated as the Air University with headquarters at Maxwell Field, Ala.
- 22—First American-built rocket to escape earth's atmosphere reached 50-mile height; it was constructed by Douglas.

April

- 1—The Bell Aircraft Corporation contracted with the AAF (under Project MX-776) to produce a 100-mile guided missile (later to be designated the Rascal).
- 16—A V-2 rocket, the first to be fired in the USA, was launched by the U. S. Army at White Sands Proving Ground, N. Mex.
- 22—The Glenn L. Martin Company contracted with the AAF to produce under Project MX-771 a surface-to-surface guided missile (later to become the Matador).
- 24—First glider commercial freight service was inaugurated by Winged Cargo, Inc., at Philadelphia; employed a DC-3, towing a Waco glider. The first stop was at Miami with other stops at Havana, Cuba, and San Juan, Puerto Rico.

June

- 3—Lt. Henry A. Johnson, flying a P-80, set a world record of 1 hour 20 minutes 31 seconds for a 1,000-kilometer course, averaging 462 mph.
- 22—The first jet-powered airmail delivery was made in two Army P-80's, one flying from Schenectady, N. Y., to Washington, D. C., and the other from Schenectady to Chicago.
- 28—The first V-2 rocket, fully instrumented for upper-air research, was launched from White Sands Proving Ground, N. Mex. It attained a height of 67 miles.

June

- 1—B-29, *Dave's Dream* dropped Nagasaki type atom bomb from 30,000 feet on 73

vessels off Bikini Atoll on Able Day of Operation CROSSROADS. Results showed 5 ships sunk and 9 heavily damaged.

- 21—The McDonnell XFH-1 Phantom was the first United States jet to operate from a carrier (USS *Franklin D. Roosevelt*).

August

- 1—A B-29 set a United States east-west transcontinental speed record by flying from New York City to Burbank, Calif., in 7 hours 28 minutes 3 seconds.
- 2—The National Air Museum was established under the Smithsonian Institution.
- 6—Two radio-controlled B-17's accompanied by control planes, made a 2,174-mile flight from Hawaii to Muroc Lake, Calif.
- 8—The XB-36 made its first flight at Fort Worth, Tex. The first B-36 production model flew for the first time on August 16, 1947. The B-36D, the 10-engine version, flew initially on March 26, 1949.
- 17—Sgt. Lawrence Lambert of Wright Field, Ohio, became the first person in the United States to be ejected from an airplane by means of an ejection seat. As part of a study of emergency escape equipment and techniques, he was ejected from a P-61 airplane travelling 302 miles per hour at an altitude of 7,800 feet.
- 30—Paul Mantz, Burbank, Calif., won the Bendix Trophy air race averaging 435.604 mph for the 2,048 miles from California to Cleveland in a P-51.

October

- 1—The Navy plane *Truculent Turtle* set a record of nonstop long distance flight, completing a 11,236-mile trip from Perth, Australia, to Columbus, Ohio, in 55 hours 15 minutes.

November

- 13—First artificial snow from a natural cloud was produced by Vincent Joseph Schaefer of General Electric Corporation. The experiment was carried out by means of dry-ice pellets dropped from a plane over Greylock Mountain, Mass.

December

- 9—AAF revealed first powered test-flight of XS-1. Plane, flown by Chalmers Goodlin, a Bell test pilot, reached a speed of 550 mph.
- 14—American Airlines in Washington announced that it would be the first commercial carrier to use "jato" (jet assisted take-off) on all its contract cargo planes.
- 15—National Airlines set a Newark-Havana commercial record of 6 hours 15 minutes.
- 17—A space biological research program was initiated at Holloman AFB, N. Mex., by the National Institute of Health.
- 22—NACA announced development of the *Tiamat*, a winged rocket missile with speed in excess of 600 mph. Flown at Langley Field, Va., it was the first guided missile to be flown successfully through a predetermined program of maneuvers.

1947

February

- 10—Maj. E. M. Cassell, USAAF, set an unofficial world helicopter altitude record of 19,167 feet at Dayton, Ohio, in a Sikorsky R-5A.

March

- 17—The USAAF's first multi-engined jet bomber, the North American SB-45 powered by four General Electric J-35 engines, flew for the first time.

April

- 8—American Overseas Airlines obtained rights for commercial service to Finland, the first United States route to Russia's sphere of Europe.
- 9—The CAA granted its first approval of the Army wartime GCA radar device for commercial planes, authorizing its use by Pan American World Airways at Gander, Newfoundland, only.
- 15—The *Reynolds Bombshell*, a converted A-26, piloted by Capt. William P. Odom, landed at La Guardia Field, N. Y., setting a new record of 78 hours 56 minutes for 20,000-mile round-the-world flight.

June

- 19—A world speed record of 623.8 mph was established by Col. Albert Boyd, flying a P-80R jet-propelled airplane over a 3 kilometer course at Muroc, Calif.

July

- 18—President Truman designated a 5-man Air Policy Committee, with Thomas K. Finletter of New York as chairman, to submit by 1 January 1948 a broad plan to give the United States the "greatest possible benefits from aviation."
- 19—John Robinson set a United States glider distance record of 33 miles: Wichita Falls to Barstow, Tex.
- 26—President Truman signed the Armed Forces Unification Act, creating a Department of the Air Force, co-equal with Army and Navy, and creating a National Military Establishment under the Secretary of Defense.

August

- 8—A. L. Berger of Wright Field, received the Thurman H. Bane Award for 1947 for work in developing new types of high temperature ceramic coatings for use in aircraft engines.
- 10—William P. Odom landed in Chicago after a record 73 hours 5 minutes 11

seconds solo round-the-world flight in a converted A-26 two-engine bomber, the *Reynolds Bombshell*. He spent 63 hours 15 minutes in the air and covered 19,645 miles.

16—Physicist Martin Pomerantz announced at Swarthmore College that he had sent a flight of 4 free balloons, carrying cosmic ray equipment, to a record height of at least 127,000 (possibly 129,000) feet.

21—President Truman named W. Stuart Symington to be the first Secretary of the Air Force.

25—A new world speed record of 650.92 mph was set by Maj. Marion E. Carl, USMC, in the Douglas D-588-1 which had been flown by Commander Turner F. Caldwell in setting the previous record of 640.74 mph on 20 August 1947.

September

8—Announcement that German V-2 rocket successfully fired on 6 September from U. S. aircraft carrier *Midway* in Atlantic tests.

18—W. Stuart Symington was sworn in as first Secretary of the Air Force; first Air Force Day. Effective date of transfer of air activities from Army to new Department of the Air Force.

22—Air Force C-54 completed first transatlantic robot-controlled flight, from Stephenville, Newfoundland, to London, a distance of 2,400 miles.

25—President Truman appointed Gen. Carl Spaatz as United States Air Force Chief of Staff.

26—Transfer of personnel, bases, and materiel from the Army to the new Department of the Air Force was ordered by Defense Secretary James W. Forrestal.

26—Maj. Gen. William E. Kepner, USAF, was named chief of the new atomic energy division of the USAF.

October

1—The prototype F-86 Sabrejet flew for the first time.

10—The United States Patent Office issued patent on the Norden bombsight, which Carl L. Norden had applied for 17 years earlier.

14—The first faster-than-sound flight was made by Capt. Charles E. Yeager at Muroc, Calif., in a rocket-powered Air Force research plane, Bell XS-1.

November

15—The Air Force disclosed that the world's first ram-jet helicopter, the McDonnell "Flying Bike," had been successfully test-flown for six months.

23—The XC-99, world's largest land plane, made its first flight, at San Diego, Calif.

24—The first live Aerobee rocket was fired to a height of 190,000 feet from White Sands Proving Ground, N. Mex.

December

10—The National Aeronautic Association awarded Lewis A. Rodert the Collier Trophy for 1946, for developing thermal ice-prevention systems.

10—At Edwards AFB, Calif., Lt. Col. John P. Stapp, USAF (MC), made his first rocket-propelled sled ride.

17—The prototype B-47 jet bomber flew for the first time at Seattle.

1948

January

2—Two USAF P-80's attained a speed of 778 mph in Japan with aid of tail winds.

4—University of California announced completion of pilot model for world's first low-pressure supersonic wind tunnel.

12—Northrop Aircraft Company announced that rocket-powered test vehicles at Muroc Air Base, Calif., had attained a speed of 1,019 mph.

15—Gen. H. S. Vandenberg, Vice Chief of Staff, USAF, approved a policy calling for development of satellite components

and the initiation of satellite development at the proper time.

22—The Navy announced that it was able to launch V-2's from carriers.

30—Orville Wright died in Dayton, Ohio, at the age of 76.

February

4—Death of Otto Praeger, founder of United States air mail service.

4—Navy and Air Force air transport systems were consolidated into Military Air Transport Service under USAF.

6—The Army announced successful electronic control of V-2 rocket in a 70-mile ascent at White Sands, N. Mex.

March

1—Congressional Aviation Policy Board recommended that the Air Force be built to 70 groups.

10—The Air Force reported dropping a non-explosive, 42,000-pound bomb from a B-29 at Muroc, Calif.

April

30—Gen. Hoyt S. Vandenberg was designated to succeed Gen. Carl Spaatz as Air Force Chief of Staff.

May

2—The Navy announced successful testing of a submarine capable of firing guided missiles.

23—Army announced dedication at Aberdeen, Md., of the first continuous wind tunnel capable of 3,000 mph winds.

24—Jacqueline Cochran set a world speed record of 432 mph for propeller-driven planes over 1,000 km. closed circuit course.

June

10—The Air Force confirmed repeated attainment of supersonic speeds by X-1 formerly XS-1) flown by Capt. C. E. Yeager.

26—Berlin Airlift (Operation VITTLES) was initiated as a response to ground blockade imposed by Russia on Berlin.

July

17—B-29's arrived in England for training at British bases. These were the first United States bombers to be based in the United Kingdom after World War II.

20—16 F-80's reached Scotland in the first west-to-east transatlantic flight by jet planes. Time from Selfridge Field, Mich.: 9 hours 20 minutes.

23—MATS was ordered to establish an Airlift Task Force with headquarters in Germany for the relief of Berlin. Maj. Gen. William H. Tunner was named to command Task Force operations.

August

6—The first B-29's to circumnavigate the globe landed near Tucson, Ariz., after a leisurely 15-day trip.

21—Announcement was made that Gen. Carl Spaatz had disclosed in his final report, before retiring as Air Force Chief of Staff, that the United States was developing a supersonic guided atomic missile with a 5,000-mile range.

28—The Navy transport *Caroline Mars* landed at Chicago after a nonstop flight from Honolulu in record time of 24 hours 9 minutes.

September

15—A world speed record of 671 mph (exclusive of air-launched planes) was set by Maj. Richard L. Johnson, USAF, in F-86A at Muroc, Calif.

28—An Army Signal Corps balloon, released at Belmar, N. J., set a 140,000-foot altitude record.

28—NACA announced that a ramjet missile had exceeded 1,600 mph.

October

19—The Navy announced that photographs of the earth's surface had been taken

from altitudes between 60 and 70 miles by cameras installed in rockets.

- 31—The Air Force revealed the use of ram-jet engines for first time on piloted aircraft, a modified F-80.

November

- 10—The first symposium on Space Medicine was held at the School of Aviation Medicine.
- 22—The Wright *Kitty Hawk* airplane arrived in Washington, D. C., at the Smithsonian Institution after 20 years in the South Kensington Museum, London.
- 30—Curtiss-Wright demonstrated its new reversible pitch propellers which enabled a C-54 to make a controlled descent from 15,000 to 1,000 feet in 1 minute 22 seconds.

December

- 1—The Continental Air Command was activated.
- 8—A 6-engine B-36 completed a 9,400 mile nonstop flight from Fort Worth to Hawaii and back without refueling.
- 17—Celebration of the return to the United States of the Wright Kitty Hawk plane, which had been in a British museum for 20 years, was held at the Smithsonian Institution on the 45th anniversary of flight.
- 20—XB-47 Stratojet averaged 500 mph for 1,000-mile flight from Moses Lake, Wash., to Albuquerque, N. Mex.
- 21—The Navy announced development of stall-proof automatic pilot capable of landing planes by radar in the "most unfavorable" weather.
- 29—Defense Secretary Forrestal announced that the United States is working on an "earth satellite vehicle program," a project to study the operation of guided rockets beyond the earth's pull of gravity.

1949

January

- 3—Bill to speed guided missile research was introduced in the House by Representative Carl Vinson of Georgia.
- 7—USAF announced X-1, flown by Capt. Charles E. Yeager, had climbed 23,000 feet from take-off, at record rate of 13,000 feet per minute.
- 13—William P. Odom, in a Beechcraft Bonanza, set a world distance record for light planes by 2,400-mile nonstop flight from Honolulu to Oakland.
- 18—A Pan American Constellation set a commercial speed record of 10 hours 2 minutes, from New York to London.
- 23—USAF began operation "Haylift" to aid snowbound western ranchers. Feed was dropped to sheep and cattle on snowbound western ranches for more than four weeks.
- 25—USAF adopted blue uniforms.

February

- 4—General authorization was given by CAA for commercial planes to use ground-controlled approach radar as a "primary aid" for landings in bad weather.
- 5—Lockheed Constellation set a new transcontinental record of 6 hours 18 minutes for commercial transport aircraft from Los Angeles to La Guardia Field.
- 8—Boeing XB-47 Stratojet set an unofficial coast-to-coast speed record of 3 hours 46 minutes, flying 2,289 miles from Moses Lake, Wash., to Andrews Air Force Base, Md., at average speed of 607.2 mph.
- 9—The Department of Space Medicine was established at the School of Aviation Medicine, Randolph AFB, Tex., with Dr. Hubertus Strughold as a member of the staff.
- 24—Republic XF-91 jet rocket interceptor unveiled by Air Force at Farmingdale, Long Island, factory.
- 24—A 2-stage rocket (a WAC Corporal mounted on a V-2 first stage) attained

an altitude of 250 miles and a speed of 5,000 miles per hour at White Sands, N. Mex.

March

- 2—At Carswell Air Force Base, Tex., USAF Boeing B-50, *Lucky Lady II*, with Capt. James Gallagher as pilot, completed the first nonstop, round-the-world flight in history, having covered 23,452 miles in 94 hours 1 minute, and having been refueled in the air over the Azores, Arabia, the Philippines, and Hawaii.
- 4—Navy flying boat, *Caroline Mars*, set new world passenger-load record by carrying 269 persons from San Diego to San Francisco.
- 8—Capt. W. P. Odom in a Beechcraft Bonanza set a new world distance record for light planes by 4,957-mile flight from Honolulu to Teterboro, N. J., in 36 hours.
- 16—First track-type landing gear delivered to USAF received by 314th Troop Carrier Wing from Fairchild Aviation Corporation for installation on C-82 aircraft.
- 25—New world helicopter speed record of 133.9 mph at Niagara Falls, N. Y., claimed by XH-12 of Bell Aircraft Company.
- 26—First 10-engine plane (6 reciprocating and 4 jet), the B-36, with span of 230 feet and length of 162 feet, made first successful test-flight at Fort Worth, Tex.
- 29—North American F-51 flown by Joe de Bona set a new cross-country record for piston-type aircraft by flying from Burbank, Calif. to LaGuardia, N. Y., in 5 hours.
- 30—The President signed a bill providing for construction of a "permanent" radar defense network for the USA.

April

- 5—The first two models of Fairchild C-119 were completed.
- 6—Curtiss Wright announced that the X-1

rocket plane (made by Bell, engine by Curtiss Wright) flew at a world-record speed of 1,100 mph for piloted planes.

- 16—Berlin Airlift's biggest day: 12,940 tons delivered by 1,398 flights in 24 hours.
- 26—At Fullerton, Calif., Bill Barris and Dick Reidel set new world flight endurance record of 1,008 hours 2 minutes in Aeronca sedan, *Sunkist Lady*. During the flight they picked up food and fuel four times a day from a jeep.
- 27—Sikorsky S-52-1 helicopter, flown by Harold E. Thompson at Cleveland, set a new world speed record of 129.6 mph for 3 kilometer course.

May

- 3—The Navy rocket Martin *Viking* fired at White Sands Proving Ground, N. Mex., reached an altitude of 51½ miles and a speed of 2,250 mph.
- 9—XF-91, jet rocket interceptor, successfully completed first test flight at Muroc, Calif.
- 11—President Harry S. Truman signed a bill providing a 3,000-mile guided missile test range for USAF. The range was subsequently established at Cape Canaveral, Florida.
- 12—The Russian blockade of Western Berlin ended. To build up stockpiles, the airlift was continued on a gradually reduced basis.
- 18—New York opened its first heliport at Pier 41, East River.
- 21—Capt. H. D. Gaddis, flying a Sikorsky S-52-1 helicopter, set a new international and United States helicopter altitude record of 21,220 feet at Bridgeport, Conn.

June

- 2—Gen. Henry H. Arnold was given permanent rank of General of the Air Force.
- 14—A monkey endured a rocket flight to a height of 83 miles, but a malfunctioning parachute caused its death on impact.

July

- 3—B-29 *Enola Gay*, the plane which dropped the atomic bomb on Hiroshima, was presented to the Smithsonian Institution.

August

- 10—President Truman signed National Security Act amendments of 1949, revising unification legislation of 1947 and converting the National Military Establishment into the Department of Defense.
- 17—The Senate ratified Geneva international treaty regarding rights in aircraft.

September

- 30—The Berlin Airlift, gradually reduced since 12 May 1949, officially ended. Results show 2,343,301.5 tons of supplies were carried on 277,264 flights, of which United States planes carried 1,783,826 tons.

October

- 4—An entire field artillery battery dropped from C-82 by parachute at Fort Bragg, N. C.
- 11—Pilots Bob Woodhouse and Woody Jongeward set a new endurance record of 1,124 hours 14 minutes in an Aeronca at Yuma, Ariz.
- 17—Boeing Airplane Co. delivered the first C-97A to Military Air Transport Service.
- 26—Pan American Boeing Stratocruiser claimed a commercial speed record of 9 hours 41 minutes for flight from New York to London.

November

- 15—Ryan Aeronautical Company released data on first air-to-air target-seeking guided missile, the XAAM-A-1 Firebird, a 10-foot, rocket-powered projectile.

- 18—Air Force C-74 Globemaster, *The Champ*, landed at Marham, England, after carrying a record 103 persons from Mobile, Ala., in 23 hours.
- 22—The Navy announced that its D-558-2 Skyrocket had repeatedly exceeded the speed of sound at Muroc, Calif.
- 29—Navy HRP-2 tandem-rotored helicopter, able to carry 16 passengers, was displayed by Piasecki Helicopter Company.

December

- 1—The Navy supersonic wind tunnel, capable of 3,000 mph speeds, was dedicated at MIT.
- 5—The USAF diverted \$50 million from other projects to begin construction of a radar screen in Alaska and certain U.S. areas, as a result of detection of a Soviet atomic explosion in August 1949.
- 25—Air Force revealed development of stupalith, a ceramic which contracts when heated and expands when cooled, and which can stand heat of 2,000 degrees, to be used on jet and rocket engines.
- 29—Jacqueline Cochran set a new international speed record of 436.995 mph for 500 kilometers (310.685 miles) without payload in an F-51 at Desert Center, Mt. Wilson course.

1950

January

- 15—General of the Air Force, Henry H. Arnold, died of heart ailment at Sonoma, Calif.
- 23—USAF established the Research and Development Command.

February

- 1—ConAC was directed to establish a Civil Air Raid Warning System.
- 6—The Defense Department announced test-firing of Navy's "Mighty Mouse," the "first successful air-to-air rocket."
- 8—Navy Neptune bomber set a distance

record for carrier-launched planes, 5,156 miles nonstop, from a carrier in the Atlantic to San Francisco in 25 hours 59 minutes.

March

- 15—The JCS, in a basic decision on guided missile roles and missions, gave the USAF formal and exclusive responsibility for strategic guided missiles.
- 22—The first 4 of 70 B-29's for the RAF under the Atlantic Pact arms aid program reached Marham, England.

May

- 16—The USAF was given full responsibility for developing and operating the Joint Long Range Proving Ground. The name was changed to Long Range Proving Ground Division, and the Division was given the status of a major air command.

June

- 1—The USAF was authorized to organize the Ground Observer Corps.
- 27—President Truman announced that he had ordered USAF to aid South Korea, which had been invaded by North Korean Communist forces.
- 27—The first enemy plane shot down in Korean War was shot down by 1st Lt. William G. Hudson, USAF, flying an F-82. The enemy plane was a YAK-9.
- 30—President Truman authorized General MacArthur to dispatch air forces against targets in North Korea.

July

- 6—James H. Doolittle was named aviator of the decade by the Harmon International Aviation Awards Committee; Jacqueline Cochran was named outstanding aviatrix; Vice Adm. Charles E. Rosendahl was cited as top aeronaut (lighter-than-air man).
- 10—Erection of the Pinetree radar network on Canadian soil was agreed to in a

joint RCAF-USAF conference 10-11 July.

- 24—The first rocket (a WAC Corporal mounted on a V-2) was fired from Cape Canaveral, Fla.

August

- 1—The Collins-Vandenberg Agreement established the leases for the cooperation of the Air Defense Command and the Army Antiaircraft Command in the air defense of the USA.

September

- 20—The USAF announced that planes would be tested by remote control, with pilots viewing instrument panels from the ground by television.
- 22—First nonstop flights of Atlantic by jet aircraft were completed when Col. David C. Schilling landed at Limestone, Maine, after flying 3,300 miles from England in 10 hours 1 minute; Lt. Col. William D. Ritchie bailed out over Labrador. Both planes refueled in the air.
- 28—In a balloon launched at Holloman AFB, eight white mice survived a flight to an altitude of 97,000 feet.
- 29—USAF announced a new record for parachute jump, 42,449 feet, set by Capt. Richard V. Wheeler at Holloman AFB, N. Mex.

October

- 10—Lt. Gen. Lauris Norstad was appointed commander of United States Air Forces in Europe.
- 25—Announcement was made of the appointment of Mr. Kaufman Keller, president of the Chrysler Corporation, to the newly-created position of Director of Guided Missiles for the U.S. Armed Forces.

November

- 8—First jet-plane aerial combat in history, between a USAF F-80 and a MIG-15,

took place in Korea. USAF Lt. Russell J. Brown shot down the MIG.

- 12—Pan American World Airways completed round-the-world radio-telephone communications system: 19,687 miles voice radio link, with 32 HF radio ground stations located across 16 islands and continents.

1951

January

- 4—Miss Caro Bayley flew Piper Super Cub 30,203 feet over Miami, Fla. to set international altitude record for light planes, second category.
- 8—Lt. Gen. Ennis C. Whitehead was appointed Commanding General of the re-established Air Defense Command.
- 16—B-36's made first appearance in Europe when 6 landed at Lakenheath, England, at end of 7,000-mile flight from Fort Worth, Tex.
- 17—Convair RB-36D reconnaissance bomber made 51 hour 20 minute, nonstop flight without refueling.
- 23—The USAF activated Project MX-1593, successor to MS-774 (prototype of Atlas ICBM) in a contract signed with Convair.
- 31—Pan American Airways Capt. Charles F. Blair, Jr., flew an F-51 from New York to London in 7 hours 48 minutes, to set a new record for the route. This eclipsed the old record of 8 hours 55 minutes, set by a Pan American Strato-cruiser 22 November 1949.

February

- 13—Pan American-Grace Airways Douglas DC-6 set a new record of 9 hours 53 minutes, for 2,734-mile flight from Miami to Lima, Peru.

March

- 15—Using a Boeing KC-97A stratofreighter tanker the Boeing Airplane Company

successfully refueled a B-47 jet bomber in flight.

April

- 2—Lt. Gen. Lauris Norstad assumed command of Allied Air Forces Central Europe under SHAPE.
- 2—USAF announced final establishment of Air Research and Development Command as a major command with Maj. Gen. David M. Schlatter as commander.
- 18—The first Aerobee research rocket flown in a space biology experiment (it contained a monkey) was launched at Holloman AFB, N. Mex.
- 20—Mrs. Ana Louisa Branger, piloting a Piper Super Cub, set an international altitude record of 27,152 feet in a Class C-1.a (planes of less than 1,103 pounds), at Alexandria, Va.

May

- 14—Max Conrad set an unofficial nonstop light plane transcontinental record in a 1000-lb. Piper Pacer, crossing the country in 23 hours 4 minutes 21 seconds.
- 20—Capt. James Jabara became the world's first jet ace when he shot down his fifth and sixth MIG's in the Korean War.
- 29—Capt. Charles F. Blair, Jr., Pan American Airways, flew across the North Pole in a converted P-51, first man to make the trip alone and in a single-engine plane.

June

- 9—Maj. Gen. Archie W. Old, Jr., assumed area command of all USAF units and organizations in French Morocco.
- 11—Navy D-558-2 Douglas Skyrocket, flown by test pilot William Bridgeman, set a new world airplane speed and altitude record at Edwards Air Force Base, Muroc Dry Lake, Calif. Exact figures withheld—speed unofficially estimated at more than 1,200 mph; altitude estimated 70,000 feet. (See also Aug. 7 and Aug. 15.)

20—USAF announced the first launching of B-61 Martin Matador (pilotless aircraft) at the Missile Test Center.

25—USAF Arnold Engineering Development Center at Tullahoma, Tenn., was dedicated by President Truman. The Center was designed to provide facilities for testing and evaluating supersonic aircraft and guided missiles.

30—The Long Range Proving Ground Division, under ARDC jurisdiction since May 14, 1951, was redesignated the Air Force Missile Test Center.

July

26—The three U.S. armed services agreed to the creation of Project LINCOLN, an armed forces-supported and M.I.T.-managed study of the air defense program.

August

1—In an exchange of diplomatic notes, Canada and the USA ratified an agreement which provided for cooperation between the two nations in the erection and operation of a radar defense network on Canadian territory.

7—A Navy Viking rocket set an altitude record for single-stage rockets, climbing to 135 miles and reaching a speed of 4,100 mph, at White Sands, N. Mex.

7—Navy D-558-2 Skyrocket, piloted by Bill Bridgeman, reached a speed of 1,238 mph.

15—At Muroc, Calif., Bill Bridgeman flew Navy D-558-2 Douglas Skyrocket to the highest altitude ever reached by a human being, 79,494 feet.

17—Col. Fred J. Ascani, flying an F-86E, set a world record of 635.686 mph for a 100-kilometer closed course.

24—Posthumous Congressional Medal of Honor was awarded to Maj. Louis J. Seville, USAF, of Chicago, who was killed 5 August 1951 near Hamchang, Korea; Seville attacked Red troops in his damaged plane until it crashed.

First Air Force CMH winner in Korean war.

24—Air Force Chief of Staff Gen. Hoyt S. Vandenberg reported that the February 1941 Nevada atomic bomb tests had disclosed the development of a new atomic tactical weapon for use against armies in the field.

September

5—USAF announced it had awarded a contract to Consolidated Vultee to build world's first atomic-powered plane. The engine was to be built by General Electric.

13—USAF announced establishment of its first pilotless bomber squadron at the Missile Test Center, Cocoa, Fla., to be formed 1 October 1951.

20—The Air Force made its first successful recovery of animals from a rocket flight when a monkey and 11 mice survived an Aerobee flight to an altitude of 236,000 feet.

24—McDonnell Aircraft Corporation won Navy's "flying crane" helicopter competition with a design using a single three-bladed rotor system, powered by small jet engines on the blade tips.

November

29—Announcement of USAF's first all-jet heavy bomber, the 8-jet XB-52.

1952

January

7—USAF announced intention to increase effective combat strength 50 percent, with personnel increase of only 20 percent, to full 143-wing, 1,273,200-man Air Force.

8—Beginning of Exercise SNOWFALL, largest United States airlift of troops to date. Between 8 and 13 January approximately 100 planes of 516th Troop Carrier Wing airlifted 8,623 troops from Campbell Air Force Base, Ky., to Wheeler-Sack Army Air Field, N. Y.

February

- 20—President Truman appointed Lt. Gen. James H. Doolittle (Ret) as head of a 3-man President's commission to conduct a 90-day study of how to relieve airport congestion near large cities.

April

- 15—YB-52, 8-jet prototype of B-52 bomber, made its first flight.
- 30—(30 April-1 May) Max Conrad, in a Piper Pacer, flew 2,462.330 miles, Los Angeles to New York, setting a world distance record for light planes in second category (aircraft with total weight, in flying order, between 1,102.3 and 2,204.6 pounds).

May

- 3—A ski-and-wheel equipped USAF C-47 made the world's first successful North Pole landing.
- 17—Dedication of the James Forrestal Research Center at Princeton University.
- 22—Two monkeys and two mice, placed in an AF Aerobee rocket, ascended to a height of about 38 miles and were returned to earth unharmed and without apparent ill-effect.

June

- 17—ZPN-1, the world's largest non-rigid airship, 324 feet long and 35 feet high, delivered to the Navy at Lakehurst, N. J., by Goodyear Aircraft Company.

July

- 2—The Air Force disclosed a new jet fighter, the Lockheed F-94C Starfire, first Air Force fighter to be armed solely with rockets.
- 5—World record of 124 parachute jumps in one day was set at Grand Prairie, Tex., by Paratrooper Neal Stewart of Birmingham, Ala.
- 14—The Ground Observer Corps (GOC) initiated its 24-hour-a-day Skywatch

program as part of a nationwide air defense effort.

- 17—A record transoceanic mass jet flight was completed by 58 F-84 Thunderjets of the 31st Fighter Escort Wing. The flight, under Col. David C. Schilling, left Turner AFB, Ga., on 4 July and landed at Yokota AFB, Japan, on 16 and 17 July after flying 10,895 miles with only 7 stops, and refueling in the air over the long stretches.
- 19—USAF announced first successful flying of balloons at controlled constant altitudes in the stratosphere for periods of more than three days.
- 31—Two USAF MATS Sikorsky H-19 helicopters completed first transatlantic helicopter flight, having flown in five stages from Westover Field, Mass., to Prestwick, Scotland.

August

- 9—A new nonstop distance record for very light planes was set by Bob Faris in a Mooney Mite by flight from Wichita, Kans., to Montpelier, Vt., 1,400 miles in 11 hours 59 minutes 30 seconds.
- 13—The Air Force announced it had ordered the 8-jet Boeing B-52 heavy bomber into full-scale production.

September

- 18—The United States and Denmark revealed that a huge strategic air base was being built at Thule, in north-western Greenland, 930 miles from the North Pole.
- 23—A USN radar defense picket ship began around-the-clock operations off the U.S. east coast as a part of the U.S. air defense system.
- 30—A Bell Rascal SGAM-63 air-to-surface strategic missile was launched for the first time.

October

- 14—75 U.S. F-84's of the 27th Fighter Escort Wing completed the longest known

overwater flight by single-engined jet fighters, from Midway to Japan. The first flight, led by Col. Donald J. M. Blakeslee, refueled in the air and covered 2,575 miles.

November

- 10—At Santa Susana, Calif., a complete liquid-rocket engine assembly (Navaho) having a thrust in excess of 100,000 lbs. was fired for the first time.
- 19—Capt. J. Slade Nash, flying an F-86D, established a world speed record of 698.505 mph at Salton Sea, Calif.
- 26—A Northrop B-62 Snark, a turbojet-powered subsonic long-range (5,500 nautical miles) missile was launched for the first time from a zero-length launcher.

1953

February

- 4—The Senate confirmed nomination of Harold E. Talbott as Secretary of the Air Force.
- 15—Northwest Airlines Stratocruiser claimed a 15 hour 10 minute flying time transpacific commercial record for a Tokyo-Seattle flight.

April

- 10—The USAF decided to adopt SAGE (MIT's Lincoln Laboratory electronic defense system) instead of the ADIS development.

May

- 7—President Eisenhower nominated Gen. N. F. Twining to succeed Gen. Hoyt S. Vandenberg as Air Force Chief of Staff.
- 18—Jacqueline Cochran, flying a Canadian-built F-86 at Edwards AFB, Calif., became the first woman to fly faster than sound. In so doing, she broke the international speed record for a 100-km. closed course by averaging 652.337 mph,

and also broke the women's jet speed record.

- 25—George Welch, North American test pilot flew the prototype YF-100 super sabre for the first time, taking off and landing at the Air Force Flight Test Center, Edwards AFB, Calif.

June

- 30—Gen. Nathan F. Twining became Chief of Staff, USAF, succeeding Gen. Hoyt S. Vandenberg.

July

- 16—Flying an F-86D Sabrejet fighter over a 3-km. course at Salton Sea, Calif., Lt. Col. William F. Barnes, USAF, set a world air speed record of 715.5 mph.
- 16—Climbing to a height of 37,063 feet in a Cessna L-19B at Wichita, Kans., test pilot William Thompson established a world altitude record for light aircraft.
- 21—At San Diego the Navy publicly demonstrated the world's first jet fighter sea-plane, the *Sea Dart* equipped with hydro skis.
- 28—A USAF B-47 Stratojet bomber set a transatlantic speed record in completing a 2,925-mile flight from Limestone AFB, Maine to Fairford, England in 4 hours 43 minutes, an average of 618 mph.

August

- 4—A USAF B-47 Stratojet bomber set a nonstop distance record for jet aircraft in making a 4,450-mile flight from Fairford, England to MacDill AFB, Fla., in 9 hours 53 minutes.
- 20—Seventeen USAF F-84G Thunderjets flew nonstop 4,485 miles from Albany, Georgia, to Lakenheath, England, the longest nonstop mass movement of fighter aircraft in history and the greatest distance ever flown nonstop by single-engine jet fighters.
- 20—Redstone missile No. 1 was fired by U.S. Army personnel at AFMTC, Cape

Canaveral, Fla. (No. 2 was launched January 27, 1954.)

- 25—An undisclosed number of USAF B-36 bombers landed in Japan after completing a pioneering nonstop mass flight from the United States.
- 25—The USAF announced that it had transformed its B-36 bomber into a "flying aircraft carrier" capable of launching and recovering jet fighters (the F-84 Thunderjet) in flight.
- 28—At Santa Susana, Calif., a complete liquid-rocket engine assembly (Navaho) having a thrust in excess of 200,000 lbs. was fired for the first time.
- 31—Flying a Douglas D-558-02 Skyrocket research aircraft which had been launched from a B-29 Superfortress at an altitude of 34,000 feet, Lt. Col. Marion E. Carl, USMC, attained an altitude of 83,235 feet at Edwards AFB, Calif.

September

- 1—The USAF announced the first instance of aerial refueling of jet-powered aircraft by jet-powered aircraft in which a standard B-47 Stratojet received fuel in the air from a KB-47B.
- 2—In a Piasecki YH-21 Workhorse at Dayton, Ohio, Capt. Russell M. Dobyms, USAF, set an altitude record of 22,289 feet for helicopters.
- 2—In an F-86D Sabrejet fighter Brig. Gen. Stanley Holtner, USAF, set a world speed record of 690.118 mph over a 100-km closed course at Vandalia, Ohio.
- 2—Capt. Harold E. Collins, USAF, set a speed record of 707.889 mph in an F-86D Sabrejet over a 15-km. straight course at Vandalia, Ohio.
- 5—In a Piasecki YH-21 Workhorse at Dayton, Ohio, Capt. Russell M. Dobyms, USAF, set a 3-km. speed record of 146.735 mph for helicopters.

October

- 3—Lt. Comdr. James Verdin, USN, flying a Douglas XF-4D Skyray fighter, set a world speed record of 752.944 mph in

four runs over a 3-km. course at Salton Sea, Calif.

- 14—The X-10 prototype of the North American B-64 Navaho, a ram-jet propelled surface-to-surface guided missile, made its initial flight.
- 16—Test pilot Robert O. Rahn, flying a XF-40 Skyray fighter at Edwards AFB, Muroc, Calif., established a world speed record of 728.11 mph over a 100-km. closed course.
- 29—Flying a F-100 Super Sabre at Edwards AFB, Calif., Lt. Col. Frank K. Everest, USAF, set a speed record of 755.149 mph over a 15-km. course.

November

- 20—In a D-558-2 which had been launched from a B-29, test pilot Scott Crossfield established a speed record of 1,327 mph at Edwards AFB, Calif.

December

- 12—In a Bell X-1A which had been launched from a B-36 bomber Maj. Charles E. Yeager, USAF, attained a speed of 1,650 mph, about twice that of sound, at Edwards AFB, Calif.

1954

January

- 2—With an average speed of 612 mph Col. Willard W. Millikan, ANGUS, established a new coast-to-coast record in the United States by flying a F-86F Sabrejet from Los Angeles to New York in 4 hours 8 minutes 5 seconds.
- 5—Col. Willard W. Millikan, ANGUS, set a New York to Washington speed record when he piloted a F-86F Sabrejet between the two cities in 24 minutes.
- 11—The USAF approved construction of 5 "Texas Towers" as part of the nation's air defense system.

February

- 24—President Eisenhower approved a National Security Council recommendation for the construction of DEW Line.

March

- 1—The USA exploded its first hydrogen bomb in the Marshall Islands on this date and its second on March 20, 1954.
- 7—The Northwest Orient Airlines established a transpacific speed record for commercial aircraft with a flight of 5,000 miles between Tokyo and Seattle in 16 hours 18 minutes.
- 16—Representative W. Sterling Cole, Chairman of the Joint Atomic Energy Committee, reported that the USA had a hydrogen weapon which could be delivered by airplane to any target in the world.
- 31—Joe D. Bona set a transcontinental speed record for piston-engine aircraft when he piloted an F-51 Mustang 2,467 miles from Los Angeles to New York in 4 hours 24 minutes 17 seconds.

April

- 1—President Dwight D. Eisenhower signed into law a bill creating the Air Force Academy.
- 1—Aided by strong tail winds, Lt. Comdr. Francis X. Brady, USN, established a transcontinental jet aircraft speed record in flying an F-9F Cougar 2,438 miles from San Diego to Brooklyn in 3 hours 45 minutes 30 seconds. In the same type aircraft two other Navy pilots came within minutes of setting the same record.
- 8—The Office of the Assistant Chief of Staff for Guided Missiles was established in Headquarters USAF.
- 17—The U.S. Army revealed that the Corporal (a guided rocket) and the Honest John (a ballistic rocket) were being delivered to troops for tactical support of ground fighting.

May

- 24—Martin Viking XI, a single-stage rocket, set an altitude record of 158 miles (834,240 feet) and attained a speed of 4,300 mph in a flight from White Sands Proving Ground, N. Mex.

June

- 2—With test pilot J. F. Coleman at the controls the Convair XFY-1, a vertical take-off aircraft, made the first free vertical take-off and landing at Moffett Naval Air Station, Mountain View, Calif.
- 4—Maj. Arthur Murray attained a height of 91,000 feet in the Bell X-1A.
- 8—The USAF announced that at Holloman AFB, New Mexico, the previous March Lt. Col. John P. Stapp had travelled at a record speed (on the ground) of 421 mph in a rocket-powered sled along a 3,500-foot track.
- 24—Harold E. Talbott, Secretary of the Air Force, announced that the permanent location of the Air Force Academy would be a 15,000-acre tract of land six miles north of Colorado Springs, Colorado.

July

- 1—The USAF established the Western Development Division (now Air Force Ballistic Missile Division) at Inglewood, Calif., under Brig. Gen. Bernard A. Schriever, with authority to direct the ballistic missile development program authorized by its May 1954 directives.
- 15—The first jet powered transport built in the United States, the Boeing 707, the prototype for the military Stratotanker and the commercial Stratoliner, was flight-tested near Seattle, Wash.
- 26—Lt. Gen. Hubert R. Harmon was appointed the first superintendent of the Air Force Academy.

August

- 3—The U.S. Navy's F2Y-1 Sea Dart, a hydro-skifighter and the world's fastest water-based plane, exceeded the speed of sound in a test flight at San Diego, Calif.
- 7—The USAF revealed that the School of Aviation Medicine had previously received the "first piece of experimental

equipment ever built specifically for the study of living conditions in space"—a sealed cabin, to simulate the interior of a spaceship.

- 26—In a Bell X-1A rocket-propelled aircraft launched from a B-29 Superfortress over Edwards AFB, Calif., Maj. Arthur Murray, USAF, reached an altitude of 90,000 feet, the greatest height so far attained by man.
- 29—Flying a Sikorsky XH-39, Warrant Officer Billy I. Wester, USA, set a helicopter speed record of 156 mph over a 3-km. course at Windsor Lock, Conn.

September

- 1—The Continental Air Defense Command—CONAD (a joint command composed of Air Force, Army, Navy, and Marine forces)—was established at Colorado Springs, Colo.
- 3—In flying a F-86 Sabrejet 649.302 mph at Dayton, Ohio, Maj. J. L. Armstrong, USAF, broke the speed record for a 500-km. closed course.
- 15—A 4-engine MATS plane set a transatlantic speed record for propeller driven aircraft in flying from Westover AFB, Mass., to Germany in 11 hours 48 minutes, at an average speed of 341 mph.

October

- 17—Piloting a Sikorsky XH-39 at Bridgeport, Conn., Warrant Officer Billy I. Wester, USA, established a world helicopter altitude record of 24,500 feet.

November

- 1—The last USAF B-29 Superfortress, the type of aircraft famed for having dropped atom bombs on Hiroshima and Nagasaki, Japan in August 1945, was withdrawn from service.
- 2—At San Diego, Calif., test pilot J. F. Coleman, flying the Convair XYF-1, took off in vertical flight, then shifted to hori-

zontal, and finally changed back to vertical for landing.

- 17—(17-19 Nov) A USAF B-47 Stratojet bomber broke all jet endurance records by shuttling nonstop between England and North Africa for 47 hours 35 minutes, covering approximately 21,000 miles.
- 18—The first flight test of an inertial guidance system for actual missile use (Navaho X-10) was conducted at Downey, Calif.
- 27—A Pan American Airways Super-Strato-cruiser set a transatlantic speed record for commercial planes when it flew from New York to Paris in 9 hours 42 minutes, averaging 371 mph.
- 29—In a flight from Los Angeles to New York an American Airlines DC-7 set a transcontinental speed record of 5 hours 34 minutes.

December

- 6—The Curtiss-Wright Corp. revealed the existence of what was believed to be the first rocket engine with throttle control. The control makes possible extended flight range in supersonic airplanes.
- 7—At Edwards AFB, Calif., the USAF made the first successful recovery of a missile (Navaho, X-10) using a fully automatic approach and landing system.
- 10—On a rocket-propelled sled run Col. John P. Stapp, USAF (MC), attained a speed of 632 mph and sustained the greatest G-force ever endured by man in recorded deceleration tests—the equivalent of Mach 1.7 at 35,000 feet.

1955

January

- 28—Lt. Comdr. William J. Manby, USN, set an official climbing record of 10,000 feet in 73.2 seconds in a North American F-J Fury at Norfolk, Va.

February

- 24—The 80-ton Convair R3Y-1 Tradewind, the world's fastest water-based air transport, made a transcontinental flight, from San Diego, Calif., to Patuxent, R. I., in 6 hours, averaging 403 mph.
- 25—A USAF B-47 Stratojet flew from March AFB, Calif., to Hunter AFB, Ga., in 3 hours 19 minutes 35 seconds, averaging 641 mph.

March

- 8—The USAF announced that at Great Falls (Montana) AFB it had formed the first unit of jet fighters capable of being launched from and recovered by mother planes—the 91st Strategic Reconnaissance Squadron—with the F-84F Thunderflash being teamed with the B-36 bomber.
- 9—Piloting a Republic F-84F Thunderstreak, Lt. Col. Robert R. Scott, USAF, established a speed record of 3 hours 40 minutes for the 2,245-mile flight from Los Angeles to New York.

April

- 6—An atomic guided missile, launched from a B-36 at a height of 42,000 feet was exploded some 6 miles above Yucca Flat, Nev. This was the highest known altitude of any nuclear blast.

May

- 18—Col. Harold M. McClelland, USAF, led a flight of four F-84 Thunderjets which established a nonstop record for single-engine jets in flying 4,840 miles from Yokota Air Base, Japan to Williams-town, Australia in 12 hours 10 minutes.
- 21—Piloting a F-86 Sabrejet, Lt. John M. Conroy, ANGUS, made the first dawn-to-dusk round-trip transcontinental flight, Los Angeles to New York, in 11 hours 26 minutes 33 seconds, averaging 445 mph.

June

- 29—The first Boeing B-52 Stratofortress to go into operational service in the U. S. Air Force was delivered to the 93d Bomber Wing at Castle AFB, Merced, Calif.

July

- 2—The biggest troop airlift in history began at Donaldson AFB, S. C., resulting in a movement of 3,900 paratroopers from the United States to Japan and 3,100 from Japan to the United States.
- 8—The first test run was held on the Supersonic Military Air Research Track (SMART), a 12,000-foot track for rocket-propelled sleds at Hurricane, Utah.
- 11—The Air Force Academy was dedicated at its temporary location, Lowry AFB, Denver, Colo., and the first class, consisting of 306 cadets, was sworn in.
- 20—The NB-26H airplane, housing an atomic reactor, made its first flight. The reactor was not activated.
- 29—The White House, through Presidential Press Secretary James C. Haggerty, announced U. S. plans to launch a basketball-sized earth satellite during the International Geophysical Year (July 1957–December 1958).

August

- 15—Donald A. Quarles assumed the duties of the Secretary of the Air Force, the fourth person to hold that position.
- 17—Ten USAF F-84F Thunderstreaks flew nonstop 5,118 miles from near London, England to Austin, Texas in 10 hours 48 minutes, setting a distance record for nonstop mass flight.
- 20—At Edwards AFB, Calif., Col. Horace A. Hanes, USAF, flying an F-100 Super Sabre, set a supersonic speed record for straightaway flight at 822.135 mph.

October

- 6—The DOD announced that it had awarded a contract to the Glenn L. Martin Co.,

as primary contractor, for the building of a rocket vehicle for the launching of an earth satellite. Martin was authorized to contract with the General Electric Co. for construction of a rocket motor for the launching vehicle.

- 16—Setting unofficial transcontinental speed records for transport aircraft, the prototype Boeing 707 crossed the United States twice in one day, averaging 592 mph on a flight from Seattle, Wash., to Washington, D. C., and 567 mph on the return trip.
- 17—At Edwards AFB, Calif., Lt. Gordon Gray, USN, flying a Douglas A-4-D Skyhawk, established a world speed record of 695.163 mph for a 500 km closed-circuit course.
- 19—The Federal Communications Commission authorized the American Telephone & Telegraph Co. to start work on the SAGE radar warning network.
- 22—The Republic F-105A, a fighter bomber designed to carry nuclear weapons and support field armies, exceeded the speed of sound on its initial flight which was made at Edwards AFB, Calif.

December

- 9—Responsibility for the development of the Thor IRBM was assigned to the Air Force Ballistic Missile Division.

1956

January

- 10—The first U. S.-built complete liquid-rocket engine having a thrust in excess of 400,000 lbs. was fired for the first time at Santa Susana, Calif.
- 17—The DOD revealed the existence of SAGE (Semi-automatic Ground Environment), an electronic air defense system.

March

- 14—The first Jupiter A (Redstone missile) launching was accomplished at Cape Canaveral, Fla.

- 27—Secretary of Defense Wilson named E. V. Murphree as unpaid "czar" of the U. S. missile program. Among his duties were those of assisting the Secretary of Defense "in direction and coordination of activities connected with research, development, engineering and production of guided missiles, particularly ballistic missiles."

May

- 5—Press reports from Operation Redwing cited evidence that the first shot of the test series on Eniwetok Atoll had been of a "pocket size" H-bomb small enough for delivery by a small aircraft or missile.
- 7—The 762d AC&W Squadron began operating the "Texas Tower" radar defense installation erected on Georges Shoal some 100 miles east of Cape Cod, Mass.
- 21—After having been dropped at an altitude of approximately 50,000 feet from a B-52 jet bomber piloted by Maj. David Crichlow, USAF, the first-known airborne H-bomb exploded over the Bikini atoll in the Pacific.
- 26—The distance record for a nonstop commercial flight was claimed for a Pan American Airways DC-7C which flew 4,800 miles from Miami, Fla., to Paris, France in 14 hours.

June

- 29—An Aerobee-Hi rocket manufactured by Aerojet-General Corp. attained an altitude of 163 miles in a launching from White Sands, New Mex.

July

- 23—At Edwards AFB Test Center, Muroc, Calif., Lt. Col. Frank K. Everest, USAF, flew a Bell X-2 rocket-powered plane at a record speed of just over 1,900 mph.

August

- 1—President Dwight D. Eisenhower signed into law a bill permitting the armed

forces to include flight instruction in ROTC programs.

- 21—Flying a F8U-1 Crusader over the Mojave Desert in California, Comdr. Robert W. Winslow, USN, set a speed record of 1,015.428 for U. S. combat planes.
- 23—(23-24 Aug) A U. S. Army helicopter, the H-21, made the first transcontinental nonstop flight for helicopters, 2,610 miles from San Diego, Calif., to Washington, D. C., in 31 hours 40 minutes.

September

- 2—At the National Aircraft Show, Oklahoma City an H-13, USA helicopter, set an endurance record in the air of 57 hours 40 minutes.
- 7—Capt. Iven C. Kincheloe set an altitude record for manned flight when at Edwards AFB, Calif., he piloted a Bell X-2 rocket-powered aircraft to a height of 126,200 feet.
- 20—The first Jupiter C (a three-stage missile) was launched at Cape Canaveral, Fla. It attained an altitude of 680 miles and travelled 3,300 miles.
- 27—After having been launched from a B-50 bomber over the Mojave Desert in California, Capt. Milburn G. Apt, flying a X-2 rocket-powered plane, set a speed record of 2,178 mph. Before the flight ended the aircraft crashed and the pilot was killed.

October

- 2—A full-scale flight-test version of a large guided missile, XSM62 (N69D series), Snark, was successfully recovered for the first time after a flight from Cape Canaveral.
- 8—The Military Air Transport Service, Department of Defense, announced that since 1948 it had made over 100,000 ocean crossings, carrying more than 400,000 passengers and 700,000 tons of mail and freight.
- 10—NACA revealed that a 4-stage rocket-propelled research missile had attained

speeds of Mach 10.4 (the equivalent of 6,864 mph at high altitudes).

November

- 8—Lt. Comdr. M. L. Lewis, USN, and Malcolm D. Ross established a world altitude record for manned balloons by ascending to a height of 76,000 feet, taking off near Rapid City, North Dakota, and landing 175 miles away near Kennedy, Neb.
- 11—The USAF's first supersonic bomber, the Convair B-58 delta-winged Hustler, capable of flying at a speed of 1,000 mph, made its initial flight at Fort Worth, Tex.
- 12—A helicopter speed record of 162.7 mph was established by a Marine Corps twin-engine aircraft, the Sikorsky S-56 at Stratford, Conn.
- 20—Gen. Lauris Norstad, USAF, succeeded Gen. Alfred M. Gruenther, USA, as Supreme Allied Commander, Europe.
- 20—The first known airplane landing at the South Pole was made when Comdr. Conrad Shinn and Lt. Comdr. Roy E. Curtis, USN, set down there with a construction party to build a polar-scientific observation station.
- 25—T/Sgt. Richard J. Patton, USAF, made the first successful polar parachute jump when he bailed out of a C-124 Globemaster from an altitude of 1,500 feet at the South Pole.
- 26—Secretary of Defense Wilson issued a memorandum to the Armed Forces Policy Council fixing the areas of jurisdiction of the three U. S. Armed Services in developing missiles of various ranges, and giving the USAF operational jurisdiction over long-range missiles.
- 30—The Martin TM-61 Matador, a jet-propelled missile, completed its final test-flight and became the USAF's "first completely tactical missile."

December

- 3—The USS *Gyatt*, the world's first known guided-missile-launching destroyer was commissioned in Boston. (Principal weapon for the new vessel was the Terrier missile.)
- 13—Maj. Arnold I. Beck, USAF, "soared" to a simulated altitude of 198,770 feet, the highest on record, in an Air Research and Development Command altitude chamber at Dayton, Ohio.

1957

January

- 18—Commanded by Maj. Gen. Archie J. Old, Jr., USAF, three B-52 Stratofortresses completed at March AFB, Calif., a 24,325-mile round-the-world-nonstop flight in the record time of 45 hours 19 minutes at an average speed of 534 mph. This was the first globe-circling nonstop flight by jet aircraft.
- 25—The YC121F, a special Lockheed super-constellation, set a transcontinental speed record for propeller-driven aircraft in flying from Long Beach, Calif., to Andrews AFB, Washington, D. C., in 4 hours 43 minutes.
- 25—An unofficial transcontinental speed record was made by a USAF B-47 bomber in flying 2,700 miles from Riverside, Calif., to Boston, Mass, in 3 hours 47 minutes.

February

- 1—The Boeing Airplane Company announced that the world's first jet tanker, the KC-135, was delivered to the USAF late in January 1957.
- 18—The first national scientific symposium on problems associated with space travel was held February 18-20, 1957.

March

- 11—A speed record for a transcontinental passenger flight was established when a Boeing 707 jet transport, with 42

passengers and a crew of 10, flew 2,335 miles from Seattle to Washington in 3 hours 48 minutes.

- 22—Flying an ASD Skywarrior, Lt. Ralph S. Barnett, USN, established an unofficial coast-to-coast speed record of 3 hours 39 minutes 24 seconds for 2,076 miles between Burbank, Calif., and Miami, Fla.

April

- 4—The USAF announced that it had awarded the Rocketdyne division of North American Aviation, Inc., a contract to study the possibilities of using ions as a source of power for space ships and missiles.
- 12—The USAF disclosed that the Ryan X-13, a jet research plane capable of vertical take-offs and landings had been flown successfully at Edwards AFB, Calif.
- 15—The 1st Missile Division, a unit organized to plan and prepare for future operational missile units, was activated at Los Angeles, Calif., as an ARDC unit.
- 19—A Douglas Thor IRBM (XSM-75) was successfully launched at Cape Canaveral, Fla.

May

- 1—James H. Douglas, Jr., became the Secretary of the Air Force, succeeding Donald A. Quarles.
- 13—Three USAF F-100C Super Sabres set a distance record for single-engine jet aircraft by flying 6,710 miles from London, England, to Los Angeles, Calif., in 14 hours 5 minutes.

June

- 2—An altitude-endurance record for manned, lighter-than-aircraft was established by Capt. Joseph W. Kittenger, Jr., USAF, who remained aloft in a balloon over Minnesota for 6 hours 34 minutes, being above 96,000 feet for 2 hours.
- 14—In flying an Aero Commander 680 to a height of 30,330 feet at Tulsa, Okla-

homa, Aviatrex Jerril Cobb established a world altitude record for light 2-engine planes.

- 21—A USAF precision team consisting of six F-100C Super Sabre interceptors completed a flight from Kindley AFB, St. George, Bermuda to Bedford, Mass. (683 nautical miles) in the record time of 1 hour 13 minutes.
- 27—The SM-73 (Goose) was the first plastic airframe missile to fly. It was also the first missile to complete countdown, launch, and flight on the first attempt.
- 28—The first phase of Project Far Side was completed, with the lifting by the world's largest balloon of a load of almost two tons of military equipment and instruments to a height of more than 104,000 feet.

July

- 1—Gen. Thomas D. White became the fourth Chief of Staff, USAF, succeeding Gen. Nathan F. Twining.
- 1—The 704th Strategic Missile Wing, the USAF's first, was activated at Cooke AFB, Calif., to train with the Snark missile.
- 19—The USAF fired its first air-to-air nuclear defense rocket, the Douglas-built MB-1 Genie, from an F-89J over Yucca Flat, Nev.
- 31—The DEW Line, a distant early-warning radar defense installation extending across the Canadian Arctic, was reported to be fully operational.

August

- 1—NORAD, a joint U. S.-Canadian North American Air Defense Command, was informally established. The agreement was formalized by an agreement ratified on May 12, 1958.
- 12—With Lt. Comdr. James M. Pruitt, USN, as the pilot a twin-jet A3D Skywarrior flew from Hawaii to California (2,438 miles) in 4 hours 12 minutes, a record for the eastward flight.
- 15—Gen. Nathan F. Twining became Chair-

man of the Joint Chiefs of Staff, the first USAF officer to serve in that position.

- 19—(19-20 Aug) Airborne for 32 hours, Maj. David G. Simons, USAF, established a manned-balloon altitude record of 102,000 feet, ascending at Crosby, Minnesota and landing at Elm Lake, South Dakota.

September

- 20—The USAF Chief of Staff, General Thomas D. White, announced the development of radar units capable of detecting ICBM's at a distance of 3,000 miles.

October

- 1—USAF military personnel for the first time launched an intercontinental missile, the XSM-62 Snark, in a flight from Cape Canaveral, Fla.
- 11—A Thor missile launched at Cape Canaveral, Fla., the second successfully tested, exceeded its designed 1,500-mile range and landed in the Atlantic Ocean some 2,000 miles from the point of launching.
- 16—The USAF successfully launched artificial meteors that traveled at a speed faster than 33,000 mph (i.e., some 8,000 mph faster than the velocity necessary to escape from the earth). (Carried by an Aerobee rocket to a height of 35 miles, the nose section then ascended to a height of 54 miles where shaped charges blasted the pellets into space.)
- 22—The Army's Jupiter (IRBM) missile was successfully fired at Cape Canaveral, Fla.
- 22—The 4th stage of a rocket fired from a balloon at 100,000 feet above Eniwetok, in Operation Far Side, penetrated at least 2,700 miles into outer space.
- 23—A USAF Bomarc missile, in 2 minutes from beginning of alert, successfully intercepted and knocked down a B-17 drone at a distance of 100 miles over the Atlantic Ocean.

- 31—A Snark ICBM launched at Cape Canaveral, Fla., flew 5,000 miles to the target area near Ascension Island.

November

- 7—President Eisenhower announced that the U. S. had solved the missile re-entry problem and showed the TV audience a nose cone recovered from a Jupiter missile fired in August 1957 at Cape Canaveral, Fla.
- 11—Gen. Curtis LeMay, USAF, flew a KC-135 tanker 6,350 miles from Westover AFB, Mass. to Buenos Aires in 13 hours 2 minutes, a world record for nonstop, nonrefueling jet flight. On the return trip he set another record of 11 hours 5 minutes 8 seconds for the 5,204 miles between Buenos Aires to Washington, D. C.
- 17—Commanded by Brig. Gen. William K. Martin, USAF, six B-52's completed at Plattsburg AFB, New York a 10,425-mile nonstop round-trip flight from the United States (having taken off at Homestead AFB, Fla.) to Argentina.
- 19—An ANP (Aircraft, Nuclear Powered) project, an integrated AEC-DOD atomic aircraft project within the AEC, was announced with Maj. Gen. Donald Keirn, USAF, as its head.
- 21—The Department of Defense announced that an ICBM base, the first of several, would be erected at Francis E. Warren AFB, Wyo.
- 26—Flying a RF-101 Voodoo jet aircraft, Lt. Gustave B. Klatt, USAF, set a west-east (Los Angeles to New York) transcontinental flight record of 3 hours 5 minutes 39.2 seconds.
- 26—In a RF-101 Voodoo jet aircraft Capt. Robert M. Sweet, USAF, established a round-trip transcontinental (Los Angeles to New York) flight record of 6 hours 42 minutes 6.9 seconds. On the return leg he set an east-west record of 3 hours 34 minutes 8.6 seconds.
- 29—In a speech at the National Press Club, General White made the first official

disclosure that the Air Force was "working on" an anti-missile missile called the Wizard.

- 29—Chief of Staff General Thomas D. White announced that the ICBM and IRBM missile programs had been assigned to SAC. He also announced that the 1st Missile Division was being transferred to SAC (effective January 1, 1958), and that the San Bernardino AF Depot would be converted to support the long-range ballistic missile program.

December

- 3—Led by Col. Archie Blood, USAF, 16 F-100D Supersabres flew from Tokyo to Honolulu—3,850 miles—in 6 hours 21 minutes, an unofficial record for the flight.
- 4—The USAF announced Bomarc launching sites would be constructed at 4 named AF installations (Dow, Otis, Suffolk, and McGuire).
- 10—The USAF Deputy Chief of Staff for Development announced the establishment of a Directorate of Astronautics.
- 12—In a F-101A Voodoo fighter bomber Maj. Adrian E. Drew, USAF established a world speed record of 1,207.6 mph over a measured course at Edwards AFB, Calif.
- 15—The 556th Strategic Missile Squadron, the first SM-62 (Snark) operational squadron, was activated at Patrick AFB, Fla.
- 17—In the first successful USAF firing of its Atlas ICBM, the missile landed in the target area after a flight of some 500 miles.
- 19—A Thor missile, the eighth tested and the fourth successfully, completed the first fully-guided IRBM flight using an all-inertial guidance system.
- 28—Capt. James E. Bowman, USA, set a 30,335-foot world altitude record for helicopters in a Cessna YH41 Seneca at Wichita, Kans.

1958

January

- 1—The USAF activated the 672d Strategic Missile (Thor IRBM) Squadron at Cooke AFB, with Col. Harry J. Zink as commander.
- 15—The USAF activated the 4751st Air Defense Missile Wing and assigned it the mission of developing and conducting a training program for Bomarc missile units.
- 29—The DOD announced plans to establish the National Pacific Missile Range as part of the Naval Air Missile Test Center at Point Mugu, Calif., the range to be designed for long-range guided-missile and ICBM testing.
- 31—Explorer I, first U. S. satellite to go into orbit, was launched by a Jupiter C rocket from Cape Canaveral, Fla.

February

- 7—The DOD named Roy W. Johnson to head the Advanced Research Projects Agency, an organization established on that day to develop outer space weapons and rockets and other space vehicles.
- 8—The USAF instituted systems management of its ballistic missile early-warning system when it contracted with RCA to manage existing communications facilities including DEW Line and SAGE. The system is designed to provide maximum early warning to NORAD, SAC, and civil defense agencies.
- 10—Airman 1/C Donald G. Ferrell spent the week of February 10-16 in a space cabin simulator at SAM, Randolph AFB, Tex.
- 18—The USAF revealed that an air-flow speed of 32,400 mph had been attained for 1/10th of a second in a wind-tunnel test at the Arnold Research and Development Center, Tullahoma, Tenn., on an undisclosed date.
- 27—Missiles Director William M. Holaday approved the USAF's Minute Man Project, a program for building a 500-

to 5,500-mile solid fuel ballistic missile that can be launched from underground installations.

- 28—The DOD announced plans for the USAF to develop long-range ballistic missiles powered by solid-fuel propellants.

March

- 17—Vanguard I, the second U.S. satellite to go into orbit, was launched from Cape Canaveral, Fla.
- 18—The U.S. Navy fired a Bull Goose, an intercontinental jet-propelled "decoy" missile designed to deceive enemy radar.
- 23—The USN accomplished the first underwater test-firing of a dummy Polaris missile in a launching in the Pacific near Los Angeles (San Clemente Island). A "pop-up" launcher was used.
- 26—White Alice, a military radio relay network making use of tropospheric scatter, was inaugurated in Alaska for the purpose of establishing better communications between isolated Arctic posts and their headquarters. It joined the radar warning outposts of the Alaskan segment of DEW Line with the Alaskan Air Command.
- 26—The Explorer III, the third U.S. satellite to go into orbit, was launched from Cape Canaveral, Fla.
- 27—A USAF K-135 Stratotanker completed the first nonstop California (Castle AFB, Merced) to New Zealand (Wellington) flight, a distance of approximately 6,000 miles, in 15 hours.
- 29—The Air Force Academy established a Department of Astronautics.

April

- 5—A USAF Atlas ICBM was successfully flown from Cape Canaveral, Fla., to the impact area some 600 miles away.
- 8—A USAF KC-135 Stratotanker completed a flight from Tokyo to Lajes Field, Terceira, Azores, a distance of 10,228 miles, in 18 hours 48 minutes, establish-

ing a nonstop, nonrefueled record for jet aircraft.

16—Flying a Grumman F11F-1F Super Tiger at Edwards AFB, Calif., Lt. Comdr. George C. Watkins, USN, reached a height of 76,828 feet, a world altitude record for ground-launched planes.

23—A Thor-Vanguard re-entry test vehicle carrying a mouse in the nose cone was launched from Cape Canaveral, Fla., for the purpose of obtaining data on influences affecting animal life in space-flight.

May

7—Flying a Lockheed F-104A Starfighter at Edwards AFB, Calif., Maj. Howard C. Johnson, USAF, set a 91,249-foot, world altitude record for ground-launched planes.

16—In level flight over a 10-mile course at Edwards AFB, Calif., Capt. Walter W. Irwin, USAF, flying a F-104A Starfighter, set a world speed record of 1,404.19 mph.

18—The first U.S. full-scale nose cone was recovered from the Atlantic Ocean 4½

hours after beginning its flight from Cape Canaveral, Fla., on a Jupiter missile.

21—The USAF revealed that the first launching site for the Titan ICBM would be Lowry Range near Denver, Colo.

30—The USAF disclosed the development of an air-to-air atomic missile, the GAR-9.

June

12—A USAF KC-135 Stratotanker set an unofficial coast-to-coast speed record for transport aircraft in flying from Los Angeles to New York in 3 hours 42 minutes 45 seconds.

27—At Cape Canaveral, Fla., a USAF strategic missile squadron successfully completed the first military launching of a Snark intercontinental missile.

27—Two USAF KC-135 Stratotankers set west-east transatlantic speed records in flying from New York to London in just under 5 hours 30 minutes. Returning on 30 June in just under 5 hours 54 minutes they established east-west transatlantic speed records.

PART TWO

CHRONOLOGY OF AMERICAN AEROSPACE EVENTS,
FROM 1903, BY DAY

JANUARY

January 1

1914—America's first regularly scheduled airline started operation across Tampa Bay between St. Petersburg and Tampa, Fla., with one Benoist flying boat and Tony Jannus as pilot. The operation lasted three months.

1929—(1-7 January) An unofficial endurance record for refueled airplane flight was set by Maj. Carl Spaatz and Capt. Ira C. Eaker in the *Question Mark*, Fokker C2-3 Wright 220, over Los Angeles Airport, with flying time of 150 hours 40 minutes and 15 seconds.

1944—United States Strategic Air Forces in Europe (USSTAF) were activated.

1958—The USAF activated the 672d Strategic Missile (Thor IRBM) Squadron at Cooke AFB, with Col. Harry J. Zink as commander.

January 2

1933—Orville Wright received the first honorary fellowship of the Institute of Aeronautical Sciences.

1948—Two USAF P-80's attained a speed of 778 mph in Japan with aid of tail winds.

1954—With an average speed of 612 mph Col. Willard W. Millikan, ANGUS, established a new coast-to-coast record in the United States by flying a F-86F Sabrejet from Los Angeles to New York in 4 hours 8 minutes 5 seconds.

January 3

1935—Antarctic flight by Lincoln Ellsworth and Herbert Hollick-Kenyon.

1949—Bill to speed guided missile research was introduced in the House by Representative Carl Vinson of Georgia.

January 4

1937—Frank Sinclair flew from New York to New Orleans in record time of five hours.

1948—University of California announced completion of pilot model for world's first low-pressure supersonic wind-tunnel.

1951—Miss Caro Bayley flew Piper Super Cub 30,203 feet over Miami, Fla., to set international altitude record for light planes, second category.

January 5

1915—1st Lt. J. E. Carberry, Signal Corps, and 2d Lt. Arthur R. Christie, 22d Infantry, made a new official 2-man American altitude record of 11,690 feet at San Diego. The flight, which lasted 1 hour 3 minutes, was made in a Curtiss tractor (OXX Curtiss 100).

1916—The 1st Company, 2d Aero Squadron, sailed from San Francisco for the Philippines. This was the first Aero Squadron to serve outside the United States.

1943—Allied Air Forces in Northwest Africa were activated under command of Maj. Gen. Carl A. Spaatz.

1954—Col. Willard W. Millikan, ANGUS, set a New York to Washington speed record when he piloted a F-86F Sabrejet between the two cities in 24 minutes.

January 6

1944—Lt. Gen. Carl A. Spaatz assumed command of United States Strategic Air Forces in Europe, and Maj. Gen. James H. Doolittle assumed command of the Eighth Air Force.

1945—45 B-29's from Chengtu bombed the Omura aircraft plant and enemy installations, and targets of opportunity in occupied China.

January 7

1945—Far East Air Forces supplemented Third Fleet air attacks on enemy airfields in northern Luzon with the largest coordinated mission of light and medium bombers (132) to date in the Southwest Pacific Area.

1949—USAF announced X-1, flown by Capt. Charles E. Yeager, had climbed 23,000 feet from take-off, at record rate of 13,000 feet per minute.

1952—USAF announced intention to increase effective combat strength 50 percent, with personnel increase of only 20 percent, to full 143-wing 1,273,200-man Air Force.

January 8

1951—Lt. Gen. Ennis C. Whitehead was appointed Commanding General of the re-established Air Defense Command.

1952—Beginning of Exercise SNOWFALL, largest United States airlift of troops to date. Between 8 and 13 January approximately 100 planes of 516th Troop Carrier Wing airlifted 8,623 troops from Campbell Air Force Base, Ky., to Wheeler-Sack Army Air Field, N. Y.

January 9

1917—Capt. H. H. Arnold was relieved from duty with the Aviation School at San

Diego and ordered to Panama to organize and command the 7th Aero Squadron.

1929—(9-16 January) C-2 Army transport, first airplane ferried by Army Air Corps to a foreign station, flew from Wright Field, Dayton, Ohio, to France Field, Central America, about 3,130 miles, with Maj. Paul Bock commanding.

1945—AAF participated in opening of Luzon, Philippine Campaign.

January 10

1910—The first American flying meet opened at Los Angeles, under the auspices of the Aero Club of California.

1946—An Army R-5, demonstrated by C. A. Moeller and D. D. Viner, set an unofficial world helicopter record by climbing to 21,000 feet at Stratford, Conn.

1956—The first U.S.-built complete liquid-rocket engine having a thrust in excess of 400,000 lbs. was fired for the first time at Santa Susana, Calif.

January 11

1935—(11-12 January) Amelia Earhart, in a Lockheed Vega with Pratt and Whitney Wasp engine, made the first solo flight from Hawaii to California, in 18 hours 16 minutes flying time.

1941—Army Air Corps announced that control of robot planes, either by radio from the ground or from another plane, had been tested successfully.

1954—The USAF approved construction of 5 "Texas Towers" as part of the nation's air defense system.

January 12

1909—The Wright Brothers sold their patent rights to the General Aerial Navigation Company of France, represented by Lazare Weiller, who paid them \$100,000 and an interest in the company.

1910—Louis Paulhan set a new solo world

altitude record of 4,165 feet at the Los Angeles Flying Meet.

1948—Northrop Aircraft Company announced that rocket-powered test vehicles at Muroc Air Base, Calif., had attained a speed of 1,019 mph.

January 13

1906—The first exhibition of the Aero Club of America opened in New York in connection with the Automobile Show.

1913—Beginning of air parcel post demonstrated by Harry M. Jones in a Wright B, covering a route from Boston to New York, carrying a cargo of baked beans for governors along the way.

1949—William P. Odom, in a Beechcraft Bonanza, set a world distance record for light planes by 2,400-mile nonstop flight from Honolulu to Oakland in 22 hours.

January 14

1943—Opening of the Casablanca Conference, at which plans for combined bomber offensive against Germany were established.

1945—China-based B-29's bombed enemy air installations on Formosa with 54 Superforts, hitting the important airfield at Kagi.

1946—A Pan American Constellation set a speed record by flying 675 miles from New York to Bermuda in 2 hours 22 minutes.

January 15

1911—At the San Francisco Air Meet (Tanforan Race Track), Lt. Myron S. Crissy, flying with P. O. Parmalee, dropped a live bomb designed by himself over the side of the Wright airplane on a target below.

1935—Maj. James H. Doolittle, with two passengers, flew an American Airlines' plane nonstop from Los Angeles to New York in 11 hours 59 minutes, setting a transcontinental record for passenger transport airplanes and a nonstop west-east transcontinental record.

1948—Gen. H. S. Vandenberg, Vice Chief of Staff, USAF, approved a policy calling for development of satellite components and the initiation of satellite development at the proper time.

1950—General of the Air Force, Henry H. Arnold, died of a heart ailment at Sonoma, Calif.

1958—The USAF activated the 4751st Air Defense Missile Wing and assigned it the mission of developing and conducting a training program for Bomarc missile units.

January 16

1911—Lt. G. E. M. Kelly, Infantry, flew with Walter Brookins in a Wright plane at 2,000 feet through the San Bruno Hills, Calif., in the first photo reconnaissance flight to locate troops (which were not discovered because they were in small groups in a wooded area).

1913—Dr. Thaddeus S. C. Lowe, balloonist of Civil War fame, died at Pasadena, Calif.

1951—B-36's made the first appearance in Europe when 6 landed at Lakenheath, England, at end of 7,000-mile flight from Fort Worth, Tex.

January 17

1943—B-17's from Henderson Field (Guadalcanal) dropped water, ammunition, and rations to forward troops near Mt. Austen.

1945—The last B-29 mission from Chengtu, China, airfields, with 91 Superforts airborne against the enemy airfield at Shinchiku, Formosa.

1951—Convair RB-36D reconnaissance bomber made a 51 hour 20 minute, non-stop flight without refueling.

1956—The DOD revealed the existence of SAGE (Semi-automatic Ground Environment), an electronic air defense system.

Jan. 18-23

January 18

- 1905—The Wright Brothers first opened negotiations with the United States Government to build an airplane for the Army.
- 1911—During the San Francisco Meet, Eugene Ely, Curtiss exhibition pilot, landed on the afterdeck of the anchored battleship, *Pennsylvania*, and took off from it in his Curtiss pusher.
- 1949—A Pan American Constellation set a commercial speed record of 10 hours 2 minutes, from New York to London.
- 1957—Commanded by Maj. Gen. Archie J. Old, Jr., USAF, three B-52 Strato-fortresses completed at March AFB, Calif., a 24,325-mile round-the-world nonstop flight in the record time of 45 hours 19 minutes at an average speed of 534 mph. This was the first globe-circling nonstop flight by jet aircraft.

January 19

- 1910—Lt. Paul W. Beck, flying with Louis Paulhan in his Farman at the Los Angeles Meet, dropped three 2-pound sandbags, simulating bombs, in an effort to hit a target. This was the first such experiment by an Army officer.
- 1918—U.S. School of Aviation Medicine began operations under Maj. William H. Wilmer, Signal Corps, at Hazelhurst Field, Mineola, N. Y.
- 1937—Howard Hughes in a Hughes Special flew from Burbank, Calif., to Newark, N. J., in 7 hours 28 minutes 25 seconds, setting a new transcontinental speed record.

January 20

- 1918—Headquarters, I Army Corps, Air Service, was organized at Neufchateau, France, with Col. William Mitchell, Signal Corps, as Chief of Air Service, I Army Corps.
- 1946—A Pan American Airways Constellation clipper set a commercial plane record for the New York-Lisbon flight by

covering the 3,425 miles in 9 hours 58 minutes.

January 21

- 1911—Lt. Paul W. Beck made the Army's first radio-telegraphic transmission from an airplane. The demonstration was on a transmitter of his own design, in Parmalee's Wright plane, at an altitude of 100 feet, to a station on Selfridge Field, Mich., 1½ miles away.
- 1911—The Curtiss North Island School and Experimental Station opened at San Diego. This later became the Signal Corps Aviation School.
- 1946—In a State of the Union report to Congress, President Truman asked for unification of the armed services.

January 22

- 1909—The Aeronautic Society of New York awarded a contract for \$5,000 to Glenn Curtiss; this was for the first airplane built for sale by Curtiss.
- 1944—Twelve hundred sorties by Mediterranean Allied Air Force planes supported the ground forces as they hit the beaches at Anzio.
- 1948—The Navy announced that it was able to launch V-2's from carriers.

January 23

- 1918—The first American military balloon ascension in the AEF took place at the American Balloon School, Cuperly, Marne, France.
- 1940—In the first American test of the practicability of moving a complete troop unit by air, a battalion of the 65th Coast Artillery was transported 500 miles by 38 bombers of the 7th Bombardment Group, Hamilton Field, Calif.
- 1949—USAF began operation "Haylift," to aid snowbound western ranchers. Feed was dropped to sheep and cattle on snowbound western ranches for more than four weeks.
- 1950—USAF established the Research and Development Command.

1951—The USAF activated Project MX-1593, successor to MX-774 (prototype of Atlas ICBM) in a contract signed with Convair.

January 24

1913—The first Curtiss tractor airplane (Signal Corps No. 21) was delivered to the Signal Corps Aviation School at San Diego.

1946—Gen. Carl A. Spaatz was named AAF Chief by President Truman, to succeed Gen. H. H. Arnold.

January 25

1912—Lt. H. H. Arnold, in a Wright plane, set an Army altitude record of 4,674 feet. The flight, lasting 59 minutes, was made from the Army's Augusta, Ga., Aviation School.

1949—USAF adopted blue uniforms.

1957—The YC121F, a special Lockheed superconstellation, set a transcontinental speed record for propeller-driven aircraft in flying from Long Beach, Calif., to Andrews AFB, Washington, D. C., in 4 hours 43 minutes.

1957—An unofficial transcontinental speed record was made by a USAF B-47 bomber in flying 2,700 miles from Riverside, Calif., to Boston, Mass., in 3 hours 47 minutes.

January 26

1911—Glenn H. Curtiss flew a seaplane from the water at San Diego, the first time this had been done in the United States.

1946—The Army announced creation by AAF of the First Experimental Guided Missiles Group to develop and test this type of weapon. The Group was activated at Eglin Field, Fla.

1946—Col. William H. Councill flew an Army P-80 nonstop from Long Beach, Calif., to La Guardia Field, N.Y., in 4 hours 13 minutes 26 seconds, to break transcontinental record; average speed was 584 mph.

January 27

1911—At an Aero Club exhibition in San Diego, Lt. T. G. Ellyson, USN, Curtiss student, took off in a Curtiss "grass cutter" plane (a ground plane, not supposed to fly) to become the first naval aviator.

1912—Clarence H. Mackay announced the establishment of the Mackay Trophy. The trophy was to be competed for annually by aviators under rules made each year or it could be awarded by the War Department for the most meritorious flight of the year.

1943—The first American bombing of Germany took place when B-17's of 1st Bombardment Wing, Eighth Air Force, attacked Wilhelmshaven and Emden.

January 28

1908—Lt. Frank P. Lahm, Henry W. Alden, and J. G. Obermeier made a balloon trip in the *Ohio* from Canton, Ohio, to Oil City, Pa., about 100 miles, in 2 hours 20 minutes.

1942—Headquarters and Headquarters Squadron of the Eighth Air Force were activated at Savannah AAB, Ga., with Col. Asa N. Duncan as commanding officer. (Exactly three years later, in England, the Eighth observed its third birthday with a 1,000-plane raid on the Reich. In its 3-year history the Eighth had flown more than 250,000 bomber and 210,000 fighter sorties, dropped 518,000 tons of bombs, and destroyed about 13,000 planes.)

1945—Clark Field, Philippines, was retaken by American forces.

1955—Lt. Comdr. William J. Manby, USN, set an official climbing record of 10,000 feet in 73.2 seconds in a North American F-J Fury at Norfolk, Va.

January 29

1926—An American altitude record of 38,704 feet was set by Lt. J. A. Macready in an XC05A-Liberty 400, at Dayton, Ohio.

Jan. 30-31, Feb. 1-3

1935—Harry Richman, flying a Sikorsky S-39, set an amphibian world altitude record of 18,641.676 feet at Miami, Fla.

1944—In the largest United States air operation to date, 800 heavy bombers of the Eighth Air Force dropped 1,886 tons of bombs on Frankfurt, Germany.

1958—The DOD announced plans to establish the National Pacific Missile Range as part of the Naval Air Missile Test Center at Point Mugu, Calif., the range to be designed for long-range guided-missile and ICBM testing.

January 30

1911—J. A. D. McCurdy, in the longest over-water flight to date, flew from Key West, Fla., to a point some 10 miles from Havana, where he was picked up by a Navy torpedo boat.

1946—Announcement was made by Maj. Gen. Curtis E. LeMay that a more advanced aeronautical engineering school would be established at Wright Field, Ohio. He also urged building a \$300,000 wind tunnel for testing supersonic aircraft.

1948—Orville Wright died in Dayton, Ohio, at the age of 76.

January 31

1909—The *New York World* announced its \$10,000 prize for a flight from any point in Greater New York to within 10 miles of the capitol at Albany during the Hudson-Fulton celebration to be held in the fall.

1914—During the month the first U.S. Naval Air Station was established at Pensacola, Fla.

1951—Pan American Airways' Capt. Charles F. Blair, Jr., flew an F-51 from New York to London in 7 hours 48 minutes, to set a new record for the route. This eclipsed the old record of 8 hours 55 minutes, set by a Pan American Strato-cruiser 22 November 1949.

1958—Explorer I, first U.S. satellite to go

into orbit, was launched by a Jupiter C rocket from Cape Canaveral, Fla.

FEBRUARY

February 1

1911—The first licensed aircraft manufacturer in the United States—Burgess and Curtis of Marblehead, Mass.—was licensed by the Wright Company.

1943—Maj. Gen. N. F. Twining, Commanding General, Thirteenth Air Force, and 14 companions were rescued by PBY's near New Hebrides Islands, after having ditched on a flight from Guadalcanal to Espiritu Santo, and having spent 6 days in life rafts.

1950—ConAC was directed to establish a Civil Air Raid Warning System.

1957—The Boeing Airplane Company announced that the world's first jet tanker, the KC-135, was delivered to the USAF late in January 1957.

February 2

1911—The exhibition of the Moisant International Aviators, a company formed to give aerial exhibitions, opened at San Antonio. The aviators, flying Bleriot, cooperated with Brig. Gen. Hoyt, commanding Fort Sam Houston, and Lt. B. D. Foulois in working on problems of reconnaissance, antiaircraft fire, and bombardment.

1925—President Coolidge signed the Kelly Bill authorizing private contract for air transport of mail.

February 3

1928—Lt. H. A. Sutton, at Wright Field, began a series of spin tests to study the spinning characteristics of planes. For this work he was awarded the Mackay Trophy.

1944—About 1,200 U. S. B-24's, B-17's, and escort fighters attacked Wilhelmshaven and Emden, Germany.

- 1945—Largest raid, to date, against Berlin by American bombers: 959 B-17's.
- 1946—The AAF disclosed in Columbus, Ohio, the development of a plane with automatic devices to pre-set take-off, flight, and landing, with the pilot doing nothing except monitoring the equipment.

February 4

- 1948—Death of Otto Praeger, founder of United States air mail service.
- 1948—Navy and Air Force air transport systems were consolidated into Military Air Transport Service under USAF.
- 1949—General authorization was given by CAA for commercial planes to use ground-controlled approach radar as a "primary aid" for landings in bad weather.
- 1953—The Senate confirmed nomination of Harold E. Talbott as Secretary of the Air Force.

February 5

- 1914—Second Lt. Joseph C. Morrow, Jr., qualified as "Military Aviator" under the rules set up for this rating, having passed his test on 27 December 1913.
- 1945—Despite poor flying conditions 589 heavy bombers of the Fifteenth Air Force, with 225 escorting fighters, flew over the Alps to drop 1,100 tons of bombs on the Regensburg oil storage plant.
- 1949—Lockheed Constellation set a new transcontinental record of 6 hours 18 minutes for commercial transport aircraft from Los Angeles to La Guardia Field.

February 6

- 1908—Bids for the Army's first airplane were considered by the Board of Ordnance and Fortification which recommended acceptance of bids by J. F. Scott, A. M. Herring, and Wright Brothers. All three bids were approved on 8 February by the Secretary of War.

- 1948—The Army announced successful electronic control of V-2 rocket in a 70-mile ascent at White Sands, N. Mex.
- 1950—The Defense Department announced test-firing of Navy's "Mighty Mouse," the first successful "air-to-air rocket."

February 7

- 1911—Harry S. Harkness flew his Antoinette airplane from North Island, San Diego, to an encampment of United States troops on the border near Tia Juana and delivered a military message—a distance of 21 miles—in 25 minutes.
- 1918—The Joint Army and Navy Technical Aeronautical Board (JAN TAB) passed resolution on Instrument Standardization in Army and Navy planes for incorporation in general specifications.
- 1923—A hazardous mercy flight over frozen Lake Michigan was made by 1st Lt. Russell A. Meredith, 1st Pursuit Group, Selfridge Field, to bring a doctor to a dying man on Beaver Island. Lt. Meredith was later awarded the DFC.
- 1958—The DOD named Roy W. Johnson to head the Advanced Research Projects Agency, an organization established on that day to develop "outer space weapons and rockets and other space vehicles."

February 8

- 1912—The second set of military airplane specifications were issued by the Signal Corps.
- 1949—A Boeing XB-47 Stratojet set an unofficial coast-to-coast speed record of 3 hours 46 minutes, flying 2,289 miles from Moses Lake, Wash., to Andrews AFB, Md., at average speed of 607.2 mph.
- 1950—Navy Neptune bomber set a distance record for carrier-launched planes, 5,156 miles nonstop, from a carrier in the Atlantic to San Francisco in 25 hours 59 minutes.
- 1958—The USAF instituted systems management of its ballistic missile early-

warning system, when it contracted with RCA to manage existing communications facilities including DEW Line and SAGE. The system is designed to provide maximum early warning to NORAD, SAC, and civil defense agencies.

February 9

1916—Cpl. A. D. Smith set a world seaplane duration record of 8 hours 42 minutes in a Martin S-Hall Scott 125, at San Diego.

1944—More than 250 bombers and fighters, one of the largest forces ever to operate from Allied bases in the Solomons to date, raided Rabaul, New Britain.

1949—The Department of Space Medicine was established at the School of Aviation Medicine, Randolph AFB, Tex., with Dr. Hubertus Strughold as a member of the staff.

February 10

1908—The first Army airplane contract with the Wright Brothers was signed by Capt. Charles S. Wallace for the Signal Corps. Herring and Scott also were awarded contracts, but failed to produce planes.

1910—The Board of Regents of the Smithsonian Institute awarded the first Langley Medal to the Wright Brothers at Washington, D. C., "for advancing the science of aerodynamics in its application to aviation by their successful demonstrations of the practicability of mechanical flight by man."

1947—Maj. E. M. Cassell, USAAF, set an unofficial world helicopter altitude record of 19,167 feet at Dayton, Ohio, in a Sikorsky R-5A.

1958—Airman 1/C Donald G. Farrell spent the week of February 10-16 in a space cabin simulator at SAM, Randolph AFB, Tex.

February 11

1913—The first bill (H. R. 28728) for a separate aviation corps was introduced by Representative James Hay of West Virginia, but failed to pass.

1929—Miss Evelyn Trout set a women's solo endurance record by staying aloft 17 hours 5 minutes 37 seconds.

1936—At Dayton, Ohio, Iona Coppedge and Josephine Garrigus, in Aeronca monoplane, set women's world altitude record of 15,252.579 feet for light airplanes in the third category (multiseater planes weighing less than 617.288 pounds when empty).

February 12

1912—Frank Coffyn took automatic aerial motion pictures from a seaplane over New York harbor.

1928—Charles (Speed) Holman established a new record of 1,093 loops at Wold-Chamberlain Airport, Minneapolis.

1931—First sale of commercial autogiro in the United States was made when the *Detroit News* bought a Pitcairn PC A-2.

1935—The USS *Macon* crashed at sea off the coast of California.

February 13

1913—The Langley Field Aerodynamic Laboratory project was inaugurated with the appointment of an advisory committee by the regents of the Smithsonian Institution.

1917—At Pensacola, Fla., Capt. Francis T. Evans, USMC, looped and spun a seaplane for the first time in aviation history.

1951—A Pan American-Grace Airways' Douglas DC-6 set a new record of 9 hours 53 minutes, for 2,734-mile flight from Miami to Lima, Peru.

February 14

1931—The Airmail Flyer's Medal of Honor was established by Congress (made retroactive to 15 May 1918).

1932—Ruth Nichols, in a Lockheed Vega, set a new world altitude record for diesel-powered planes—19,928 feet—at Floyd Bennett Field, N. Y.

1939—A B-15 commanded by Maj. Caleb V. Haynes reached Chile, South America, from Langley Field, Va., in 29 hours 53 minutes flying time, with 3,250 pounds of medical supplies for earthquake victims.

February 15

1908—Bids were received for building the Government airship under the revised specifications; the contract was awarded to Capt. Thomas S. Baldwin on 24 February.

1944—Medium and heavy bombers made a 254-plane attack on the Abbey of Monte Cassino, Italy, ahead of the Fifth Army.

1953—A Northwest Airlines Stratocruiser claimed a 15 hour 10 minute flying time transpacific commercial record for a Tokyo-Seattle flight.

February 16

1914—Lt. J. C. Carberry and Lt. W. R. Taliaferro, flying a Curtiss plane (Signal Corps No. 23), set an Army altitude record of 8,700 feet at San Diego.

1914—Seaplanes and flying boats were classed as "vessels" by the Department of Commerce.

1918—Plant 1-A for assembly of American-made airplanes began operations at Romorantin, France.

1945—Troop carrier C-47's dropped 2,065 paratroopers on Corregidor after combating a heavy air bombardment of enemy guns and positions.

February 17

1911—Glenn Curtiss flew a Curtiss seaplane from North Island to the battleship *Pennsylvania* in San Diego harbor, alighted alongside and was hoisted aboard by a launch crane. Later, he took off from the water and returned

to North Island. This was the first seaplane demonstration with the U.S. Navy.

1912—The first pilot physical examination was published by the U.S. Army.

1943—The Mediterranean Air Command was activated under the command of Air Chief Marshal Sir Arthur Tedder with three subordinate commands: Northwest African Air Forces (Maj. Gen. Carl Spaatz), Middle East Air Command (Air Chief Marshal Sir Sholto Douglas), and RAF Malta Air Command (Air Vice Marshal Sir Keith Park).

February 18

1918—The 103d Pursuit Squadron, AEF, was formed with members of the Lafayette Escadrille; it began operations at the front under tactical control of the French.

1921—The first emergency, free-type parachute escape from a U.S. plane was made by C. C. Eversola, airmail pilot, near Minneapolis. The jump was at 800 feet from a DH-4, which had lost its right propeller and had gone into a dive and spin.

1938—The General William E. Mitchell Memorial Plaque for achievements in aeronautics was presented to Jacqueline Cochran for her speed records.

1957—The first national scientific symposium on problems associated with space travel was held February 18-20, 1957.

1958—The USAF revealed that an air-flow speed of 32,400 mph had been attained for 1/10th of a second in a wind-tunnel test at Arnold Research and Development Center, Tullahoma, Tenn., on an undisclosed date.

February 19

1934—Under Presidential order the Army Air Corps started flying domestic airmail. The assignment continued until 10 March when it was stopped after nine pilots and passengers had been killed.

1936—Ex-Brig. Gen. William Mitchell died in Doctor's Hospital, New York City. He was buried in Milwaukee, Wis.

February 20

1944—Opening mission of "Big Week"—six days of strikes by Eighth Air Force and Fifteenth Air Force against German aircraft plants and targets.

1945—The Secretary of War approved plans for the establishment of the White Sands Proving Ground, a rocket-firing installation.

1952—President Truman appointed Lt. Gen. James H. Doolittle (Ret) as head of a 3-man President's commission to conduct a 90-day study of how to relieve airport congestion near large cities.

February 21

1921—(21-24 February) Lt. William D. Coney, Air Service, made a solo transcontinental flight from Rockwell Field, Calif., to Jacksonville, Fla., in 22 hours 27 minutes flying time.

1924—Alaskan air mail was flown by Carl B. Eielson from Fairbanks to McGrath.

1935—Leland S. Andrews with Henry Meyers, co-pilot, and G. D. Rayburn, radio operator, flew an American Air Lines' plane from Los Angeles to Floyd Bennett Field, N. Y., in 11 hours 34 minutes 16 seconds, setting a transcontinental record for passenger transport airplanes.

1945—U.S. Thunderbolts attacked Berchtesgaden, Germany, for the first time, striking mainly at the railroad station. (Hitler's retreat was not bombed.)

February 22

1921—(22-23 February) Jack Knight and E. M. Allison flew the first transcontinental air mail flight from San Francisco to New York in 33 hours 20 minutes, with Knight flying at night from North Platte, Nebr., to Chicago.

1924—Lt. J. A. Macready, in an XC-05A-

Liberty 400, set a U.S. altitude record of 38,704 feet.

1942—The first American air headquarters in Europe in World War II, the U.S. Army Bomber Command, USAFBI, was established under the command of Brig. Gen. Ira C. Eaker.

1945—The Eighth and Fifteenth Air Forces began an all-out assault on German communications under Operation CLARION.

February 23

1909—J. A. D. McCurdy made the first airplane flight in Canada when he flew the Aerial Experiment Association's plane the *Silver Dart* over Baddeck Bay, Nova Scotia.

1911—The first Curtiss amphibian was demonstrated at North Island, San Diego, by Glenn H. Curtiss, taking off and alighting on land and water.

1912—The first official recognition of the rating "Military Aviator" appeared in War Department Bulletin No. 2.

February 24

1914—All pusher airplanes were condemned by an Army board meeting at the Signal Corps Aviation School, San Diego. The action was taken because of the large number of accidents and deaths in planes of this type.

1915—Macy automatic pilot tests were begun at San Diego with Raymond V. Morris, Curtiss test pilot, at the controls.

1949—The Republic XF-91 jet rocket interceptor was unveiled by the Air Force at the Farmingdale, Long Island, factory.

1949—A 2-stage rocket (a WAC Corporal mounted on a V-2 first stage) attained an altitude of 250 miles and a speed of 5,000 mph at White Sands, N. Mex.

1954—President Eisenhower approved a National Security Council recommendation for the construction of DEW Line.

1955—The 80-ton Convair R3Y-1 Trade-wind, the world's fastest water-based air transport, made a transcontinental

flight, from San Diego, Calif., to Patuxent Naval Air Station, Md., in 6 hours, averaging 403 mph.

February 25

1914—Theodore C. Macaulay, flying a Curtiss pusher with an OX engine, set a new American land plane altitude record of 12,139.8 feet at San Diego.

1944—The final missions of "Big Week."

1955—A USAF B-47 Stratojet flew from March AFB, Calif., to Hunter AFB, Georgia, in 3 hours 19 minutes 35 seconds, averaging 641 mph.

February 26

1918—The 2d Balloon Company, the first U.S. Air Service unit to serve with American Troops at the front in World War I, arrived at the Toul Sector, was assigned to I Corps, and began operations on 5 March 1918.

1940—The War Department created the Air Defense Command to integrate defenses of the United States against air attack. The Command, primarily a planning agency, was located at Mitchel Field, N. Y.; it was under Brig. Gen. James E. Chaney, who assumed command on 15 March 1940.

1945—Lt. Gen. Millard F. Harmon was lost at sea while on a flight in the Pacific.

February 27

1911—At North Island, San Diego, Lt. T. G. Ellyson, USN, flew with Glenn Curtiss in Curtiss' seaplane to become his first seaplane passenger.

1920—An official world altitude record of 33,113 feet was set by Maj. R. W. Schroeder in Lepere-Liberty 400 at McCook Field, Dayton, Ohio.

1938—The goodwill flight to Buenos Aires of 6 B-17's under Lt. Col. Robert D. Olds, which had left Miami on 17 February, returned to Langley Field, Va.; flying time: southbound, 33 hours 30 minutes; return, 33 hours 45 minutes.

The flight from Miami to Buenos Aires was the longest nonstop mass Air Corps flight to date.

1958—Missiles Director William M. Holaday approved the USAF's Minute Man Project, a program for building a 500- to 5500-mile solid-fuel ballistic missile that can be launched from underground installations.

February 28

1911—Modesto, Calif., inserted a clause in its charter providing for the building and maintenance of municipal airports when needed.

1917—For the first time in the United States, the human voice was transmitted by radio telephone from airplane to ground at San Diego.

1918—Under President Wilson's proclamation, licenses were required for civilian pilots or owners of airplanes.

1958—The DOD announced plans for the USAF to develop long-range ballistic missile powered by solid-fuel propellants.

February 29

1944—Fifth Air Force bombers put both of the Japanese air bases at Alexishafen, New Guinea, out of operation.

1944—Fifth Air Force supported the first landing made in the Admiralty Islands, which completed the isolation of Rabaul.

MARCH

March 1

1912—Bert Berry made the first *attached-type* parachute jump from an American airplane. The jump was made at 1,500 feet over Jefferson Barracks, St. Louis, Mo., from a Benoist pusher flown by Antony Jannus, using a parachute bought from Leo Stevens, manufacturer of balloons and related lighter-than-air equipment.

1937—The first YB-17A, Flying Fortress,

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was delivered to 2d Bombardment Group, Langley Field, Va.

1946—General Carl Spaatz was designated Commanding General, Army Air Forces.

1948—The Congressional Aviation Policy Board recommended that the Air Force be built to 70 groups.

1954—The USA exploded its first hydrogen bomb in the Marshall Islands on this date and its second on March 20, 1954.

March 2

1910—Lt. B. D. Foulois began solo flying at Fort Sam Houston, San Antonio.

1913—The first flying pay was authorized—35 percent over base pay for officers detailed on aviation duty.

1949—At Carswell Air Force Base, Tex., USAF Boeing B-50, *Lucky Lady, II*, with Capt. James Gallagher as pilot completed the first nonstop, round-the-world flight in history, having covered 23,452 miles in 94 hours 1 minute, and having been refueled in the air over the Azores, Arabia, the Philippines, and Hawaii.

March 3

1911—Lt. B. D. Foulois and civilian pilot P. O. Parmalee made a 106-mile nonstop flight from Laredo to Eagle Pass, Tex., in Collier Wright, in an effort to prove to ground forces the usefulness of the airplane. Messages were dropped and radio telegraphic messages received.

1911—The first appropriation for air operations, \$125,000, was authorized, for Army fiscal year 1912.

1915—The National Advisory Committee for Aeronautics was created to supervise and direct the scientific study of flight problems with a view to their practical solution.

March 4

1909—President Taft approved a joint resolution of Congress awarding the Con-

gressional Gold Medal to the Wright brothers.

1924—Two Martin bombers and two DH4's broke an ice jam in the Platte River at North Bend, Nebr., after six hours of bombing.

1943—The end of the Bismarck Sea action, in which a major Japanese effort to reinforce Lae was turned back by aircraft of the Southwest Pacific Air Forces. Over 40,000 tons of Japanese shipping was sunk and between 50 and 60 enemy planes were destroyed.

1949—The Navy flying boat, *Caroline Mars*, set a new world passenger-load record by carrying 269 persons from San Diego to San Francisco.

March 5

1913—Field Order No. 1, Hq., First Aero Squadron in the field near Texas City, Texas, stated, "The First Aero Squadron is hereby organized," but the organization was provisional.

1923—An auxiliary jettisonable belly tank, fitted to bomb rack of MB3A at Selfridge Field, Mich., increased flying radius to about 400 miles.

1939—Nonstop air mail system by pick-up was demonstrated by Norman Rintoul and Victor Yesultantes in a Stinson Reliant at Coatesville, Pa.

1944—Brigadier Orde C. Wingate's Special Force was landed at Broadway (North Burma) in a night glider operation.

March 6

1913—Lt. J. H. Towers and Ensign G. D. Chevalier, USN, in the Navy Curtiss flying boat, scouted a "hostile fleet" during Guantanamo maneuvers.

1942—The first U. S. Army Air School for negroes, at Tuskegee, Ala., graduated its first class.

1944—In the first major USAAF attack on Berlin, 660 heavy bombers unloaded 1,600 tons of bombs.

March 7

1911—A new type airplane radio, employing a small Marconi transmitter and a loop antenna (thereby doing away with hanging antenna), was demonstrated by Percy G. B. Morris and J. A. D. McCurdy at Palm Beach, Fla.

1924—Lt. E. H. Barksdale and navigator B. Jones in a DH4B—Liberty 400 navigated on instruments from McCook Field, Dayton, Ohio, to Mitchel Field, N. Y., a distance of 575 miles.

1954—The Northwest Orient Airlines established a transpacific speed record for commercial aircraft with a flight of the 5,000 miles between Tokyo and Seattle in 16 hours 18 minutes.

March 8

1913—S. S. Jerwan, chief pilot for Moisant, delivered an air mail letter to ex-President Taft by dropping it from his monoplane in front of Taft's hotel in Augusta, Ga.

1918—Maj. Edward C. Schneider and Maj. James L. Whitney, in simulated altitude flight, reached an artificial altitude of 34,000 feet in 24 minutes at Signal Corps Laboratory, Mineola, N. Y.

1946—CAA granted the first commercial license for a helicopter—license NC-1H was issued for the Bell Model 47 two-place helicopter.

1949—Capt. W. P. Odom in a Beechcraft Bonanza set a new world distance record for light planes by a 4,957-mile flight from Honolulu to Teterboro, N. J., in 36 hours.

1955—The USAF announced that at Great Falls (Mont.) AFB it had formed the first unit of jet fighters capable of being launched from and recovered by mother planes—the 91st Strategic Reconnaissance Squadron—with the F-84F Thunderflash being teamed with the B-36 bomber.

March 9

1940—D 17A Beechcraft biplane piloted by T/Sgt. T. A. Petras, U. S. Marine Corps, flew to an altitude of 21,050 feet (believed to be a record altitude above the antarctic) to measure cosmic rays for U. S. Antarctic Expedition.

1942—The War Department was reorganized into three autonomous forces: the Army Air Forces, the Ground Forces, and Services of Supply.

1945—In a change of tactics which doubled the bomb load, the Twentieth Air Force sent more than 300 B-29's from the Marianas against Tokyo in a low-altitude, incendiary, night raid, destroying about one-fourth of the city.

1955—Piloting a Republic F-84F Thunderstreak, Lt. Col. Robert R. Scott, USAF, established a speed record of 3 hours 40 minutes for the 2,245-mile flight from Los Angeles to New York.

March 10

1919—Brig. Gen. William Mitchell succeeded Maj. Gen. W. L. Kenly as Director of Air Service.

1943—The Fourteenth Air Force was activated under the command of Maj. Gen. Claire Chennault.

1948—The Air Force reported dropping a non-explosive, 42,000-pound bomb from a B-29 at Muroc, Calif.

March 11

1912—The Army Air School was opened in the Philippines by Lt. Lahm at Ft. William McKinley, Manila, with two volunteer students, Lt. Moss L. Love and Cpl. Vernon L. Burge, the latter the first enlisted man taught to fly.

1918—The first DSC awarded to Army Air Service personnel went to Lt. Paul Baer of 103d Squadron for attacking a group of seven German pursuit planes, one of which he destroyed.

1945—The greatest weight of bombs dropped in a USAAF strategic raid on a single

target in Europe fell on Essen where 1,079 bombers released 4,738 tons.

1947—A speed record for a transcontinental passenger flight was established when a Boeing 707 jet transport, with 42 passengers and a crew of 10, flew 2,335 miles from Seattle to Washington in 3 hours 48 minutes.

March 12

1908—The *Red Wing*, the first of the Aerial Experiment Association's planes, made its initial flight at Lake Keuka, Hammondsport, N. Y. The plane, whose design is credited to Lt. Thomas Selfridge, was flown by F. W. Baldwin.

1946—Army Air Forces School was redesignated as the Air University with headquarters at Maxwell Field, Ala.

March 13

1911—Capt. W. Irving Chambers, USN, was assigned to the Bureau of Navigation to devote exclusive efforts to naval aeronautics.

1917—The birth of Army Air Intelligence took place when an Intelligence subdivision office was approved in the Aeronautical Division by Chief Signal Officer, Brig. Gen. George O. Squier.

March 14

1915—Lincoln Beachey was killed at San Francisco Exposition when, in pulling out of a dive, the wings broke off from the fuselage.

1918—First activities of 1st Pursuit Group took place when an element of two pilots of the 95th Squadron went on patrol in France.

1945—Italy-based American bombers cooperated directly with the Red Army in attacks on tactical targets, selected by the Russians, in Austria, Hungary, and Yugoslavia.

1956—The first Jupiter A (Redstone missile) launching was accomplished at Cape Canaveral, Fla.

March 15

1916—First United tactical air unit in the field, the 1st Aero Squadron, Capt. B. D. Foulois commanding, with headquarters at Columbus, N. Mex., began operations with General Pershing's Punitive Expedition against Mexico.

1945—Italy-based heavy bombers of the Fifteenth Air Force flew their longest mission of the war, an attack on the synthetic oil plant at Ruhland, Germany.

1950—The JCS, in a basic decision on guided missile roles and missions, gave the USAF formal and exclusive responsibility for strategic guided missiles.

1951—Using a Boeing KC-97A strato-freighter tanker, the Boeing Airplane Company successfully refueled a B-47 jet bomber in flight.

March 16

1907—The Wright Brothers' project for an Army airplane was renewed by Cortlandt F. Bishop, president of Aero Club of America, through President Theodore Roosevelt; this led to the first airplane contract between the Army and the Wright Brothers.

1916—Capt. Dodd, pilot, and Capt. Foulois, observer, in a Curtiss plane, made the first American military aerial reconnaissance flight when they flew from Columbus, N. Mex., over Mexican territory.

1926—Dr. Robert Goddard launched the world's first liquid fueled rocket at Auburn, Mass. It traveled 184 feet in 2½ seconds at an average speed of 60 mph.

1944—First land-based air attack on Truk, Caroline Islands, was made by 11 Seventh Air Force B-24's flying from Kwajalein.

1949—The first track-type landing gear delivered to USAF, was received by 314th Troop Carrier Wing from Fairchild Aviation Corporation for installation on C-82 aircraft.

1954—Representative W. Sterling Cole, Chairman of the Joint Atomic Energy

Committee, reported that the USA had a hydrogen weapon which could be delivered by airplane to any target in the world.

March 17

- 1911—The first military-type Model D Curtiss plane was demonstrated before Army and Government officials at Potomac Park, Washington, D. C. This was the first Curtiss bought by the Army (Signal Corps No. 2).
- 1941—Milwaukee renamed its airport General Mitchell Field.
- 1945—A total of 307 B-29's dropped 2,300 tons of incendiaries on Kobe, Japan.
- 1947—The USAAF's first multi-engined jet bomber, the North American SB-45 powered by four General Electric J-35 engines, flew for the first time.
- 1958—Vanguard I, the second U. S. satellite to go into orbit, was launched from Cape Canaveral, Fla.

March 18

- 1945—1,250 U. S. bombers escorted by 670 fighters gave Berlin its heaviest daylight attack of the war, dropping 3,000 tons of bombs on transportation and industrial areas.
- 1958—The U. S. Navy fired a Bull Goose, an intercontinental jet-propelled "decoy" missile designed to deceive enemy radar.

March 19

- 1910—Orville Wright opened the first Wright Flying School at Montgomery, Ala., on the site which later became Maxwell Field.
- 1918—First operations across the lines in France were made by the 94th Squadron of the 1st Pursuit Group.

March 20

- 1909—The Herring-Curtiss Company was formed to build airplanes with capital stock of \$360,000.
- 1919—The 28th Pursuit Squadron was at-

tached by flights to various RAF squadrons on the British front, in France.

- 1922—The Navy's first airplane carrier, USS *Langley* (the converted collier, *Jupiter*), was commissioned at Norfolk, Va.

March 21

- 1911—A new Wright patent for lateral balance, which covered ailerons, was issued to Orville and Wilbur Wright.
- 1916—Organization of Escadrille Americaine, or Nieuport 124, was authorized by French Air Department; the unit was later known as the Lafayette Escadrille.
- 1939—A Board of Officers, composed of Col. Hugo E. Pitz, Lt. Col. Joseph T. McNarney, Maj. Karl S. Axtator, and Maj. George C. Kenney, was appointed for the purpose of selecting sites for main permanent air base and auxiliary landing fields in Puerto Rico.

March 22

- 1946—The first American-built rocket to escape earth's atmosphere reached a 50-mile height; it was constructed by Douglas.
- 1950—The first 4 of 70 B-29's for the RAF under the Atlantic Pact arms aid program reached Marham, England.
- 1957—Flying an A3D Skywarrior, Lt. Ralph S. Barnett, USN, established an unofficial coast-to-coast speed record of 3 hours 39 minutes 24 seconds for 2,076 miles between Burbank, Calif., and Miami, Fla.

March 23

- 1903—The first Wright airplane patent, based on their 1902 glider, was filed in America, but not issued until 22 May 1906.
- 1921—Lt. A. G. Hamilton dropped 23,700 feet by parachute, at Chanute Field, Ill.
- 1958—The USN accomplished the first underwater test-firing of a dummy Polaris

missile in a launching in the Pacific near Los Angeles (San Clemente Island). A "pop-up" launcher was used.

March 24

- 1939—Jacqueline Cochran in Beechcraft plane (Twin Wasp powered) set a women's national altitude record of 30,052.43 feet, over Palm Springs, Calif.
- 1945—Allied airborne forces landed across the Rhine near Wesel in Operation VARSITY, total of 7,000 aircraft sorties.
- 1945—The Fifteenth Air Force, flying from southern Italy, bombed Berlin for the first time when approximately 150 B-17's dropped 357 tons of bombs on industrial targets.

March 25

- 1940—Air Corps contractors were authorized to sell modern types of Army combat airplanes to anti-Axis governments, under a "liberalized release policy," as a means for expanding future Air Corps production facilities.
- 1944—First operational use of VB-1 Azon vertical bomb, by Fifteenth Air Force against Avisio Viaduct, successfully closing the Brenner Pass. Subsequently Azon employed in ETO (June 1944) and, most successfully, in CBI (Nov 1944–Aug 1945).
- 1949—New world helicopter speed record of 133.9 mph at Niagara Falls, N. Y., was claimed by XH-12 of the Bell Aircraft Company.

March 26

- 1940—United States commercial airlines completed a full year of flying without a fatal accident or serious injury to a passenger or crew member.
- 1941—Air Districts were redesignated as Air Forces: Northeast as First, Northwest as Second, Southeast as Third, and Southwest as Fourth.
- 1941—The Air Corps Technical Training Command was established.

1943—The First Air Medal awarded to a woman was presented to 2d Lt. Elsie S. Ott, ANC, who served as nurse for five patients evacuated from India to Washington, D. C.

1949—The first 10-engine plane (6 reciprocating and 4 jet), the B-36, with span of 230 feet and length of 162 feet, made the first successful test-flight at Fort Worth, Tex.

1958—White Alice, a military radio relay network, making use of tropospheric scatter, was inaugurated in Alaska for the purpose of establishing better communications between isolated Arctic posts and their headquarters. It joined the radar warning outposts of the Alaskan segment of DEW Line with the Alaskan Air Command.

1958—The Explorer III, the third U. S. satellite to go into orbit, was launched from Cape Canaveral, Fla.

March 27

1909—An agreement was entered into whereby the Aero Club of America became the aviation section of the Automobile Club of America.

1941—Base-Lease Agreement was signed by United States and Great Britain, leasing eight air and naval bases in the British Atlantic and Caribbean possessions in return for United States destroyers; this implemented the 2 September 1940 agreement.

1942—The U. S. War and Navy Departments announced jointly that the Navy would have sole command of antisubmarine warfare off east and west coasts of the United States with authority over Army air patrol units.

1945—In a move to close the Shimonoseki Strait, Japan, to shipping, 195 B-29's of the XXI Bomber Command dropped mines in the area; most of the planes carried 12,000-lb. loads.

1956—Secretary of Defense Wilson named E. V. Murphree as unpaid "czar" of the U. S. missile program. Among his duties

were those of assisting the Secretary of Defense "in the direction and coordination of activities connected with research, development, engineering and production of guided missiles, particularly ballistic missiles."

1958—A USAF K-135 Stratotanker completed the first nonstop California (Castle AFB, Merced) to New Zealand (Wellington) flight, a distance of approximately 6,000 miles, in 15 hours.

March 28

1935—Dr. Robert Goddard launched the first rocket equipped with gyroscopic controls. It attained a height of 4,800 feet, a horizontal distance of 13,000 feet, and a speed of 550 mph.

1944—The Fifteenth Air Force flew its first "thousand ton" raid, striking communication targets in Italy in support of Operation STRANGLE, designed to shut off logistical support to German troops in central Italy.

March 29

1923—Lts. H. R. Harris and Ralph Lockwood in a DH4L Liberty 400 set a world speed record for 1,000 kilometers of 127.42 mph at Dayton, Ohio.

1923—Lt. R. L. Maughan in a Curtiss 465, at McCook Field, Dayton, Ohio, set a world speed record of 236.587 mph.

1949—A North American F-51, flown by Joe de Bona, set a new cross-country record for piston-type aircraft by flying from Burbank, Calif., to LaGuardia, N. Y., in 5 hours.

1958—The Air Force Academy established a Department of Astronautics.

March 30

1931—Transfer of mail from an airplane to an airship at Scott Field, Ill.

1937—Pan American Airways completed a 7,000-mile survey flight from Pago Pago to Auckland, New Zealand, in a Sikorsky S-42B.

1945—26 B-29's completed the final mission

of the XXI Bomber Command from the India bases in a strike on Bukum Island near Singapore.

1949—The President signed a bill providing for construction of a "permanent" radar defense network for the USA.

March 31

1909—During the month Amherst College put its name in 35-foot high white letters; this was the first air marking on record.

1911—About this date the Missouri National Guard Signal Corps established an air section and members were taught flight and ballooning; probably the first unit of its kind.

1913—Lt. W. C. Sherman, riding as a passenger with Lt. Milling on a nonstop cross-country flight from San Antonio to Texas City, made the first Army aerial map from a plane.

1954—Joe D. Bona set a transcontinental speed record for piston-engine aircraft when he piloted an F-51 Mustang 2,467 miles from Los Angeles to New York in 4 hours 24 minutes 17 seconds.

APRIL

April 1

1912—The Army Flying School was transferred from Augusta, Ga., to College Park, Md.

1918—The Army opened an American Aviation Headquarters in Rome, Italy, and a definite agreement was made with the Italians to train American pilots for World War I service.

1941—The United States and Mexico signed an agreement providing for reciprocal transit of military aircraft through the territory of the two countries.

1946—The Bell Aircraft Corporation contracted with the AAF (under Project MX-776) to produce a 100-mile guided missile (later designated the *Rascal*).

1954—President Dwight D. Eisenhower signed into law a bill creating the Air Force Academy.

Apr. 2-6

1954—Aided by strong tail winds, Lt. Comdr. Francis X. Brady, USN, established a transcontinental jet aircraft speed record in flying an F-9F Cougar 2,438 miles from San Diego to Brooklyn in 3 hours 45 minutes 30 seconds. In the same type aircraft two other Navy pilots came within minutes of setting the same record.

April 2

1916—Col. William A. Glassford reported at San Diego to assume command of the Signal Corps Aviation School.

1942—The first combat mission of the Tenth Air Force, a strike by three heavy bombers against shipping near Port Blair, was led by Maj. Gen. Lewis H. Brereton.

1951—Lt. Gen. Lauris Norstad assumed command of Allied Air Forces Central Europe under SHAPE.

1951—USAF announced final establishment of Air Research and Development Command as a major command with Maj. Gen. David M. Schlatter as commander.

April 3

1916—Capt. William Mitchell reported to Chief Signal Officer to assume charge of the Aeronautic Division.

1944—First heavy air attack on Budapest was made by 375 Mediterranean Allied Air Force B-17's and B-24's.

April 4

1933—Navy dirigible, *Akron*, crashed into the sea, killing 73 people, among them Rear Admiral William A. Moffett, Chief of the Navy's Bureau of Aeronautics.

1944—The Twentieth Air Force was activated in Washington, D. C.

1944—The first United States air attack on Bucharest, Romania, was made by Italy-based bombers of the Fifteenth Air Force.

1945—A YR-4 helicopter of the Tenth Air Force, Air-Jungle Rescue Detachment, landed in enemy territory in Burma and

successfully evacuated the survivor of a PT-19 crash.

1957—The USAF announced that it had awarded the Rocketdyne division of North American Aviation, Inc., a contract to study the possibilities of using ions as a source of power for space ships and missiles.

April 5

1916—The Governors Island Training Corps was organized by Philip A. Carroll. The organization, which undertook to teach civilians to fly, became the nucleus of the 1st Reserve Aero Squadron which later became the 26th Aero Squadron.

1943—Operation FLAX, a concentrated attack on the Axis air transport service between Italy and Tunisia via staging airdromes in Sicily, was begun by planes of the Northwest African Air Forces and resulted in claims of 201 enemy planes destroyed.

1949—The first two models of Fairchild C-119 were completed.

1958—A USAF Atlas ICBM was successfully flown from Cape Canaveral, Fla., to the impact area some 600 miles away.

April 6

1924—(6 April-28 September) Air Service Officers made the first round-the-world air tour, the first transpacific flight, and the first westbound Atlantic crossing. Leaving from and returning to Seattle, they flew 26,345 miles in 363 hours flying time, with an elapsed time of 175 days. The Collier Trophy was awarded the Air Service; the Mackay Trophy and the DSM were awarded to Capt. L. H. Smith and Lts. L. Wade, L. P. Arnold, E. H. Nelson, J. Harding, and H. H. Ogden.

1930—Transcontinental glider in tow was piloted by Capt. Frank Hawks from San Diego to New York, 2,860 miles, in 36 hours and 47 minutes.

1949—Curtiss Wright announced that the X-1 rocket plane (made by Bell, engine

by Curtiss Wright) flew at a world-record speed of 1,100 mph for piloted planes.

1955—An atomic guided missile, launched from a B-36 at a height of 42,000 feet was exploded some 6 miles above Yucca Flat, Nev. This was the highest known altitude of any nuclear blast.

April 7

1916—Lt. H. A. Dargue and Capt. B. D. Foulois were fired on by Mexican mounted rurales at Chihuahua City, Mexico, where they had landed with dispatches for the U. S. Consul.

1945—The first fighter-escorted missions were made by B-29's against Japan.

April 8

1931—Amelia Earhart flew an autogiro to an altitude of 19,000 feet at the Pitcairn Aviation Field near Philadelphia.

1940—A B-18 made the first recorded non-stop flight from Denver to Miami.

1947—American Overseas Airlines obtained rights for commercial service to Finland, the first United States route to Russia's sphere of Europe.

1954—The Office of the Assistant Chief of Staff for Guided Missiles was established in Headquarters USAF.

1958—A USAF KC-135 Stratotanker completed a flight from Tokyo to Lajes Field, Terceira, Azores, a distance of 10,228 miles, in 18 hours and 48 minutes, establishing a nonstop, nonrefueled record for jet aircraft.

April 9

1941—A United States-Danish agreement gave the United States the right to construct and operate airfields in Greenland.

1947—The CAA granted its first approval of the Army wartime GCA radar device for commercial planes, authorizing its use by Pan American World Airways at Gander, Newfoundland, only.

April 10

1915—The first Junior Military Aviator test was issued.

1931—Airship sub-cloud observation car was demonstrated by Lt. Wilfred J. Paul at Langley Field, Va.

1945—About 50 German jet aircraft shot down 10 American bombers in the Berlin area, the largest loss of the war to jets in a single mission.

1953—The USAF decided to adopt SAGE (MIT's Lincoln Laboratory electronic defense system) instead of the ADIS development.

April 11

1908—Lt. Frank P. Lahm was put in charge of the Aeronautical Division, Office Chief Signal Officer.

1911—The Army's first permanent flying school was inaugurated at College Park, Md., with the request that four hangars be constructed.

1918—The first United States patrol over the enemy lines by an observation squadron in World War I was made by I Corps Observation Squadron, 1st Observation Group, equipped with biplace Spads.

April 12

1927—A new American duration record of 51 hours 11 minutes and 25 seconds was set by Clarence D. Chamberlin and B. B. Acosta in a Bellanca-15 Wright 200.

1930—The U. S. Army Corps set a new world record for altitude combat formation flying at Mather Field, Sacramento, Calif., when 19 planes of the 95th Pursuit Squadron, commanded by Capt. H. M. Elmendorf, reached a height of 30,000 feet. The previous record was 17,000 feet.

1942—A formation of 3 B-17's and 10 B-25's, led by Brig. Gen. Ralph Royce, attacked Japanese shipping and installations in the Philippines. These planes, based at Darwin, Australia, staged at

Mindanao, Philippine Islands, (4,000 miles round trip).

1957—The USAF disclosed that the Ryan X-13, a jet research plane capable of vertical take-offs and landings had been flown successfully at Edwards AFB, Muroc, Calif.

April 13

1913—At San Diego, Lt. S. H. McLeary set a new Army altitude record of 8,400 feet in his Curtiss plane.

1925—Henry Ford started an airplane freight line between Detroit and Chicago—the first such commercial flights on a regular schedule.

April 14

1918—Lts. Douglas Campbell and Alan F. Winslow, of the 94th Squadron of the 1st Pursuit Group, brought down the first two enemy airplanes downed by the American Expeditionary Forces.

1936—Boris Sergievsky set an amphibian world altitude record of 24,950.712 feet and a world record for amphibians with payload of 500 kilograms at Stratford, Conn.

1940—The first Air Corps detachment assigned to an Alaskan station arrived at Fairbanks, Alaska.

April 15

1912—The Signal Corps ordered its first tractor airplane from the Burgess Company and (Greeley) Curtis.

1928—(15-21 April) The first eastbound Arctic crossing was made in a Lockheed Vega monoplane with skis by Capt. G. H. Wilkins and Lt. C. B. Eielson, Point Barrow to Green Harbor, Spitzbergen, 2,200 miles in 20 hours and 20 minutes flying time. En route the plane was grounded for five days by a storm.

1941—Igor Sikorsky piloted a Vought-Sikorsky in the first officially recorded rotor helicopter flight in the western hemisphere; flying time, 1 hour 5

minutes 14.5 seconds; at Stratford, Conn.

1947—The *Reynolds Bombshell*, a converted A-26, piloted by Capt. William P. Odom, landed at La Guardia Field, N. Y., setting a new record of 78 hours 56 minutes for 20,000-mile round-the-world flight.

1952—The YB-52, 8-jet prototype of B-52 bomber, made its first flight.

1957—The 1st Missile Division, a unit organized to plan prepare for future operational missile units, was activated at Los Angeles, Calif., as an ARDC unit.

April 16

1912—The first United States licensed woman pilot, Harriet Quimby, flew the English Channel.

1926—The Department of Agriculture purchased its first cotton dusting plane.

1935—(16-17 April) The "Pan American Clipper" flew from Alameda, Calif., to Honolulu in 18 hours and 37 minutes, in the first test flight for Pan American Airways transpacific commercial air service.

1946—A V-2 rocket, the first to be fired in the USA, was launched by the U. S. Army at White Sands Proving Ground, N. Mex.

1949—Berlin Airlift's biggest day: 12,940 tons delivered by 1,398 flights in 24 hours.

1958—Flying a Grumman F11F-1F Super tiger at Edwards AFB, Calif., Lt. Comdr. George C. Watkins, USN, reached a height of 76,828 feet, a world altitude record for ground-launched planes.

April 17

1923—A world speed record of 114.35 mph for 1,500 kilometers was set by Lt. H. R. Harris, in a DH4L-Liberty 375 at Dayton, Ohio.

1943—The Eighth Air Force made its first 100-plane attack on a single target, against Bremen, Germany.

1954—The U. S. Army revealed that the *Corporal* (a guided rocket) and the *Honest John* (a ballistic rocket) were being delivered to troops for tactical support of ground fighting.

April 18

1910—Night flights were made by Walter Brookins, Wright pilot, at Montgomery, Ala.

1911—Lt. John Rodgers, USN, the first Wright School Navy pilot, soloed at Dayton, Ohio.

1942—The Doolittle Raid on Tokyo, by 16 B-25's, was led by Lt. Col. James H. Doolittle, USAAF. The planes took off from the carrier *Hornet*.

1951—The first Aerobee research rocket flown in a space biology experiment (it contained a monkey) was launched at Holloman AFB, N. Mex.

April 19

1919—American distance record was set in a nonstop flight, Chicago to New York, by Capt. E. F. White and mechanic H. M. Schaefer in DH4—Liberty 400, flying a distance of 738.6 miles in 6 hours and 50 minutes.

1935—(19-20 April) Amelia Earhart flew from Burbank, Calif., to Mexico City, with one stop, in 13 hours and 32 minutes elapsed time.

1937—The first letter to encircle the world by commercial air mail was dispatched from New York City. It was routed via San Francisco, Hong Kong, Penang, Amsterdam, and Brazil, and was returned to New York on 25 May 1937.

1957—A Douglas Thor IRBM (XSM-75) was successfully launched at Cape Canaveral, Fla.

April 20

1912—The conditions of the Military Aviator test were published in the report of the Secretary of War to the House of Representatives.

1916—Sgt. Maj. Elliot Cowdin became the

first American pilot to receive the French Medaille Militaire.

1943—Seventh Air Force made the first attack on Tarawa with B-24's staging from Funafuti (Ellice Islands).

1951—Mrs. Ana Louisa Branger, piloting a Piper Super Cub, set an international altitude record of 27,152 feet in the Class C-1.a (planes of less than 1,103 pounds) at Alexandria, Va.

April 21

1911—Lts. T. D. Milling and Henry H. Arnold were ordered to Dayton, Ohio, to take instructions in flying at the Wright School.

1913—The first federal aircraft registration and license bill was introduced in the Senate (S. 1295) by Mr. Boise Penrose of Pennsylvania.

1933—Maiden flight of Navy dirigible *Macon*.

April 22

1908—Capt. Charles deF. Chandler, accompanied by Theodore Roosevelt, Jr., son of the President, and Capt. Fitzhugh Lee, military aide to the President, made a balloon ascent which lasted 4½ hours; they landed at Delaware City.

1938—E. V. Rickenbacker purchased Eastern Air Lines from North American Aviation, Inc., for \$3,500,000.

1943—Lt. Stewart of the 76th Fighter Squadron and Lt. Chin Hao of the Chinese Air Force reconnoitered Lashio, Burma, in one of the first operational missions in which Chinese and American personnel flew together.

1946—The Glenn L. Martin Co. contracted with the AAF to produce under Project MX-771 a surface-to-surface guided missile (later to become the *Matador*).

April 23

1919—Under S. O. 95, the following were rated Military Aviators for Distinguished Service in World War I, with

75 percent flying pay: Brig. Gen. William Mitchell, Lt. Cols. Lewis H. Brereton (MA from 1913), John W. Reynolds, Maj. Melvin A. Hall, Carl Spaatz, and Capt. Reed M. Chambers.

1924—The National Balloon Race, San Antonio, Texas., was won by W. T. Van Orman who landed at Rochester, Minn., covering a distance of 1,725.22 kilometers.

1958—A Thor-Vanguard re-entry test vehicle carrying a mouse in the nose cone was launched from Cape Canaveral, Fla., for the purpose of obtaining data on influences affecting animal life in spaceflight.

April 24

1929—Miss Elinor Smith, at Roosevelt, Long Island, set a women's solo endurance record by staying aloft 26 hours 21 minutes 32 seconds.

1946—First glider commercial freight service was inaugurated by Winged Cargo, Inc., at Philadelphia; it employed a DC-3, towing a Waco glider. The first stop was at Miami with other stops at Havana, Cuba, and San Juan, Puerto Rico.

April 25

1940—The aircraft carrier *Wasp* was commissioned.

1944—The first land plane attack on Guam was made by Seventh Air Force B-24's from Eniwetok; Navy PBV's went along on a photo reconnaissance mission.

1945—The last Eighth Air Force attack on an industrial target: 274 escorted heavy bombers dropped 500 tons on Skoda Works at Pilsen, Czechoslovakia.

April 26

1934—Boris Sergievsky set a world seaplane record for greatest load carried to an altitude of 2,000 meters by carrying 16,608 pounds, at Bridgeport, Conn.

1949—At Fullerton, Calif., Bill Barris and Dick Riedel set a new world flight en-

durance record of 1,008 hours and 2 minutes in the Aeronca sedan, *Sunkist Lady*. During the flight they picked up food and fuel four times a day from a jeep.

April 27

1911—The first Army Curtiss plane and the second Army Wright plane (both pushers) were accepted at San Antonio, Tex., by the Signal Corps.

1913—Robert G. Fowler and cameraman, Raymond A. Duhem, flew nonstop from Panama to Cristobal, ocean-to-ocean, in 57 minutes. This was the first seaplane flight across the Isthmus of Panama, the first seaplane flight in Panama, the first passenger-carrying flight in Central America, and the pictures were the first taken from the air of the Canal or Central America.

1918—Brig. Gen. William L. Kenly was put in charge of Air Service Division, formerly Air Division.

1949—A Sikorsky S-52-1 helicopter, flown by Harold E. Thompson at Cleveland, set a new world speed record of 129.6 mph for 3 kilometer course.

April 28

1919—The first jump from an airplane with free type backpack parachute (later adopted as standard) was made at McCook Field, Dayton, Ohio, by civilian Leslie Irving who jumped from a DH-9 flown by Floyd Smith, designer of the parachute.

1937—The "Pan American Clipper" arrived at Hong Kong, completing the first commercial flight across the Pacific.

April 29

1905—Daniel Maloney began a series of glides with the Montgomery glider, taking off from captive balloons.

1918—Lt. Edward V. Rickenbacker, who later became the American Ace of Aces, shot down his first enemy airplane.

1926—The National Balloon Race at Little Rock, was won by Ward T. Van Orman and W. W. Morton, who landed at Petersburg, Va., a distance of 848 miles.

April 30

1917—During the month, Maj. William Mitchell flew over the enemy lines, the first American Army officer to do so.

1948—Gen. Hoyt S. Vandenberg was designated to succeed Gen. Carl Spaatz as Air Force Chief of Staff.

1952—(30 April-1 May) Max Conrad, in a Piper Pacer, flew 2,462.330 miles, Los Angeles to New York, setting a world distance record for light planes in second category (aircraft with total weight, in flying order, between 1,102.2 and 2,204.6 pounds).

MAY

May 1

1913—For the second time airplanes participated in Army maneuvers when a Burgess tractor (flown by Lt. Thomas D. Milling with Lt. William C. Sherman as observer) and a Wright (flown by Lt. Roy C. Kirtland with Lt. Eric L. Ellington as observer) took part in 2d Division maneuvers by making reconnaissance flights at Texas City, Tex.

1925—The National Balloon Race at St. Joseph, was won by Ward T. Van Orman and C. K. Wollam, landing at Reform, Ala., a distance of 941.468 kilometers.

1957—James H. Douglas, Jr., became the Secretary of the Air Force, succeeding Donald A. Quarles.

May 2

1918—Lt. Col. Henry J. Damm and Maj. Oscar Brindley were killed while testing a DH-4 at Dayton, Ohio.

1923—(2-3 May) The first nonstop trans-continental flight, 2,520 miles, New York to San Diego, was flown by Lts.

O. G. Kelly and J. A. Macready in a Fokker T2-Liberty 375, with a flying time of 26 hours 50 minutes 3 seconds. The DFC and Mackay Trophy were awarded for the flight.

1948—The Navy announced successful testing of a submarine capable of firing guided missiles.

May 3

1943—Lt. Gen. Frank M. Andrews, Commanding General, European Theater of Operations, U. S. Army, was killed in an air crash in Iceland.

1949—The Navy rocket Martin *Viking* fired at White Sands Proving Ground, N. Mex., reached an altitude of 51½ miles and a speed of 2,250 mph.

1952—A ski-and-wheel equipped USAF C-47 made the world's first successful North Pole landing.

May 4

1911—The War Department approved sending the Army's first Wright plane to the Smithsonian Institution.

1927—Capt. H. C. Gray, Air Corps, reached an unofficial altitude of 42,470 feet in a free balloon at Scott Field, Ill.

1929—The National Balloon Race, Pittsburgh, Pa., to Canavoy, Savage Harbor, Prince Edward Island, 952 miles, was won by Lt. T. G. W. Settle, USN, and Ensign W. Bushnell, USN.

May 5

1910—A world altitude record of 23,800 feet for kites was set at Mt. Weather (Va.) Observatory; the kite broke its own earlier record.

1914—The Christmas patent on hinged-inset trailing-edge ailerons was issued. The invention became standard on aircraft.

1956—Press reports from Operation Redwing cited evidence that the first shot of the test series on Eniwetok Atoll had been of a "pocketsize" H-bomb small

enough for delivery by a small aircraft or missile.

May 6

1908—(6-14 May) The Wrights renewed their flights at Kitty Hawk. These were witnessed by reporters, ending all doubt that the Wrights had built a plane that could fly.

1912—Three Army planes, based at the Army's flying field in College Park, Md., flew the first Army group cross-country flight to the Chevy Chase Club, Md.

1937—The German dirigible Hindenberg burned while mooring at Lakehurst, N. J., killing 36 persons.

May 7

1953—President Eisenhower nominated General N. F. Twining to succeed Gen. Hoyt S. Vandenberg as Air Force Chief of Staff.

1956—The 762d AC&W Squadron began operating the "Texas Tower" radar defense installation erected on Georges Shoal some 100 miles east of Cape Cod, Mass.

1958—Flying a Lockheed F-104A Starfighter at Edwards AFB, Calif., Maj. Howard C. Johnson, USAF set a 91,249 world altitude record for ground-launched planes.

May 8

1911—The first Navy airplane, A-1 an amphibian, was ordered from Glenn Curtiss.

1919—The first transatlantic flight was begun by Lt. Comdr. Albert C. Read and crew in Navy plane NC-4. The other planes which started the trip did not complete the flight.

1935—Amelia Earhart made the first non-stop flight from Mexico City to Newark, N. J., in 14 hours 19 minutes.

May 9

1918—Flight surgeons were organized and assigned to United States flying fields.

1926—The first flight to the North Pole was made by Richard Byrd, navigator, and Floyd Bennett, pilot, in a Fokker monoplane.

1932—The first blind solo flight (without a check pilot aboard), solely on instruments, was made by Capt. A. F. Hegenberger, Air Corps, at Dayton, Ohio, for which he was awarded the Collier Trophy.

1949—XF-91, jet rocket interceptor, successfully completed its first test flight at Muroc, Calif.

May 10

1911—Lt. G. E. M. Kelly became the second Army officer killed in an airplane when he crashlanded his Curtiss pusher at San Antonio, Tex., to avoid striking a crowd of soldiers during maneuvers.

1913—War air bombing in America was inaugurated when Didier Masson began a series of bombing raids for Obregon against Federal gunboats in Guaymas Bay in the Gulf of California.

1944—The Chengtu Project (construction in China of 5 VHB bases and 6 fighter fields) was completed. Begun in January, the task was accomplished by 400,000 coolies using the most primitive methods.

May 11

1918—The first American-made airplane, the DH-4, with Liberty engine, was received in the AEF.

1944—End of Operation STRANGLE (19 March-11 May), in which MAAF's operations against enemy lines of communications in Italy totaled 50,000 sorties, dropping 26,000 tons of bombs.

1949—President Harry S. Truman signed a bill providing a 3,000-mile guided-missile test range for USAF. The range was subsequently established at Cape Canaveral, Fla.

May 12

1909—Dr. R. M. Randall in *Greylock* won the second contest for the Forbes Trophy in a point-to-point balloon race from North Adams to Leeds, Mass.

1926—Lincoln Ellsworth, American explorer, flew across the North Pole in the dirigible *Norge*, commanded by Roald Amundsen.

1928—A record flight for single-seater planes from France Field, Canal Zone, to Bolling Field, D. C., was made by Lts. R. W. Douglas and J. E. Parker in two Boeing PW9-D12 Curtiss.

1949—The Russian blockade of Western Berlin ended. To build up stockpiles, the airlift was continued on a gradually reduced basis.

May 13

1908—The first balloon radio reception in the United States was received during a flight from Fort Myer to Woodwardville, Md.

1911—Lts. H. H. Arnold and T. D. Milling completed their flying training at Simms Station, Dayton, Ohio, to become the first Wright School Army Pilots.

1941—21 B-17D's took off from Hamilton Field, Calif., in the first mass flight of bombers over the Pacific; they landed at Hickam Field, Hawaii, 13 hours and 10 minutes later, on 14 May.

1957—Three USAF F-100C Super Sabres set a distance record for single-engine jet aircraft by flying 6,710 miles from London, England, to Los Angeles, Calif., in 14 hours 5 minutes.

May 14

1908—The first passenger flight in history took place in the Wright plane at Kitty Hawk in preparation for delivery of airplane to U. S. Government. Wilbur Wright piloted the machine and Charles Furnas, an employee, was the first passenger.

1915—A contract was let for first Navy air-

ship D-1 to the Connecticut Aircraft Company and in July a floating airship shed was contracted for.

1951—Max Conrad set an unofficial nonstop light plane transcontinental record in a 1,000-lb. Piper Pacer, crossing the country in 23 hours 4 minutes 21 seconds.

May 15

1918—The Government's first permanent air mail route, Washington to New York, was inaugurated by Army pilots.

May 16

1917—The Aircraft Production Board was created. It was superseded by the Aircraft Board on 1 October 1917, which was dissolved on 19 May 1919.

1940—President Roosevelt called for production of 50,000 planes a year.

1945—Fighter-bombers began assault on the Ipo Dam area (Luzon) in the largest mass employment of napalm in the Pacific war.

1950—The USAF was given full responsibility for developing and operating the Joint Long Range Proving Ground. The name was changed to Long Range Proving Ground Division, and the division was given the status of a major air command.

1958—In level flight over a 10-mile course at Edwards AFB, Calif., Capt. Walter W. Irwin, USAF, flying a F-104A Starfighter, set a world speed record of 1,404.19 mph.

May 17

1913—Domingo Rosillo flew from Key West to Havana in a Morane land monoplane to win a \$10,000 prize, flying 90 miles in 2 hours 30 minutes.

1934—Boris Sergievsky and Raymond B. Quick, in a Sikorsky S-42, set a United States seaplane altitude record for seaplanes carrying a payload of 5,000 kilograms, 20,406.762 feet, at Bridgeport, Conn.

May 18-21

1952—The James Forrestal Research Center at Princeton University was dedicated.

May 18

1918—American day bombardment aviation began with the establishment of the 96th Squadron at Amanty airdrome, France.

1942—An agreement was signed by the United States and Panama providing for the loan of defense sites in Panama, including a number of air bases for use in defense of the Canal.

1949—New York opened its first heliport at Pier 41, East River.

1953—Jacqueline Cochran, flying a Canadian-build F-86 at Edwards AFB, Calif., became the first woman to fly faster than the speed of sound. In so doing, she broke international speed record for a 100-km. closed course by averaging 652.337 mph, and also broke the women's jet speed record.

1955—Col. Harold M. McClelland, USAF, led a flight of four F-84 Thunderjets which established a nonstop record for single-engine jets in flying 4,840 miles from Yokota Air Base, Japan to Williamstown, Australia in 12 hours 10 minutes.

1958—The first U. S. full-scale nose cone was recovered from the Atlantic Ocean, 4½ hours after beginning its flight from Cape Canaveral on a Jupiter missile.

May 19

1908—Lt. T. E. Selfridge, U. S. Army, first soldier to fly a heavier-than-air machine, piloted the airplane *White Wing* (the second of Dr. Alexander Graham Bell's Aerial Experiment Association planes) at Hammondsport, N. Y. This plane was equipped with hinged ailerons.

1919—M/Sgt. Ralph W. Bottriell made the first jump by Army personnel with a free back-pack type parachute. This event was the first action in point of time for which the distinguished Flying Cross was awarded.

May 20

1916—Lt. Col. George O. Squier was assigned as Officer-in-Charge of the Aviation Section, Signal Corps.

1918—Army aeronautics was divorced from the Signal Corps and two air departments were created: Bureau of Military Aeronautics and Bureau of Aircraft Production.

1926—President Coolidge signed the Air Commerce Act, the first Federal legislation regulating civil aeronautics.

1932—Amelia Earhart in Wasp-powered Lockheed Vega began the first solo flight across the North Atlantic by a woman.

1939—The first regularly scheduled transatlantic passenger and air mail service was inaugurated by Pan American Airways.

1951—Capt. James Jabara became the world's first jet ace when he shot down his fifth and sixth MIG's in the Korean War.

May 21

1918—Maj. Gen. William L. Kenly became Director of Military Aeronautics.

1927—The first solo nonstop transatlantic flight—New York to Paris—was completed by Charles A. Lindbergh.

1937—Amelia Earhart and Fred Noonan set out from San Francisco on west-east round-the-world flight which ended on 2 July when the fliers disappeared in the Pacific.

1949—Capt. H. C. Gaddis, flying a Sikorsky S-52-1 helicopter, set a new international and United States helicopter altitude record of 21,220 feet at Bridgeport, Conn.

1955—Piloting a F-86 Saberjet, Lt. John M. Conroy, ANGUS, made the first dawn-to-dusk round-trip transcontinental flight, Los Angeles to New York, in 11 hours 26 minutes 33 seconds, averaging 445 mph.

1956—After having been dropped at an altitude of approximately 50,000 feet

from a B-52 jet bomber piloted by Maj. David Critchlow, USAF, the first-known airborne H-bomb exploded over the Bikini atoll in the Pacific.

1958—The USAF revealed that the first launching site for the Titan ICBM would be Lowery Range near Denver, Colo.

May 22

1908—The 3-man airship of Roy Knabenshue made its first ascent at Toledo, Ohio, with the owner, Charles K. Hamilton, and George Duesler aboard.

1912—Marine Corps aviation began when 1st Lt. A. A. Cunningham was ordered to "duty in connection with aviation."

1917—The Curtiss schools at Newport News and Miami were discontinued for use in training civilian pilot candidates for Air Service Signal Officers Reserve Corps, and students were assigned to cadet schools at designated universities.

1934—The Mackay Trophy for 1933 was awarded to Capt. W. T. Larson for development of procedures of aerial frontier defense involving instrument take-offs and landings on land and sea and instrument flying over water.

1952—Two monkeys and two mice, placed in an AF Aerobee rocket, ascended to a height of about 38 miles and were returned to earth unharmed and without apparent ill-effect.

May 23

1921—The National Balloon Race at Birmingham, Ala., was won by R. H. Upson, landing at Stuart, Va., a distance of 683.972 kilometers.

1940—(23-25 May) The first demonstration of complete military maneuvers simulating European combat operations was held at Barksdale Field, La., by 320 Army aircraft during Third Army maneuvers.

1948—The Army dedication at Aberdeen, Md., of the first continuous wind tunnel capable of 3,000-mph winds.

May 24

1912—Paul Beck set a new unofficial American duration record of 4 hours, 23 minutes, 15 seconds in his airplane, *Miss Columbia*, at Mineola, Long Island.

1917—French Premier Ribot asked the United States to furnish 5,000 pilots, 50,000 mechanics, and 4,500 planes for active service by spring of 1918.

1948—Jacqueline Cochran set a world speed record of 432 mph for propeller-driven planes over a 1,000-km. closed circuit course.

1954—Martin Viking XI, a single-stage rocket, set an altitude record of 158 miles (834,240 feet) and attained a speed of 4,300 mph in a flight from White Sands Proving Ground, N. Mex.

May 25

1910—Orville and Wilbur Wright flew together for the first time at Dayton, Ohio.

1927—Lt. James H. Doolittle flew the first successful outside loop.

1931—(25-28 May) A world endurance record, nonrefueled, of 85 hours 32 minutes 38 seconds was set by Walter E. Lees and F. A. Brossi in a Bellanca Packard Diesel, 225 hp., at Jacksonville, Fla.

1938—Frank W. Fuller, Jr., in a Seversky, flew from San Francisco to Seattle in record time of 2 hours 31 minutes 41 seconds.

1953—George Welch, North American test pilot flew the prototype YF-100 Super Sabre for the first time, taking off and landing at the Air Force Flight Test Center, Edwards AFB, Calif.

May 26

1917—Maj. T. F. Dodd, Air Service, Signal Corps, was appointed Aviation Officer on the Staff of Commander-in-Chief, American Expeditionary Forces, beginning overseas organization of the Air Service, AEF.

1920—GAX twin-Liberty engine armored triplane armed with eight machine guns

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and a 37-mm cannon was tested at McCook Field, Dayton, Ohio.

1923—A nonstop transcontinental south-north flight, Ellington Field, Houston, Tex., to Gordon, Ontario, was made by Lt. H. G. Crocker in a DH4B-Liberty 400 with a flying time of 11 hours 55 minutes.

1956—The distance record for a nonstop commercial flight was claimed for a Pan American Airways DC-7C which flew 4,800 miles from Miami, Fla., to Paris, France, in 14 hours.

May 27

1913—Issuance of G. O. No. 39, which provided that Army officers who qualified as Military Aviators would receive a Military Aviator's Certificate and badge. In all, 24 officers qualified.

1931—The first full-scale wind tunnel for testing airplanes was placed in operation at the Langley Field Laboratory of the National Advisory Committee for Aeronautics.

May 28

1913—Lts. T. D. Milling and W. C. Sherman made a 2-man duration and distance record of 4 hours 22 minutes for 220 miles from Texas City, Tex., to San Antonio.

1914—Glenn H. Curtiss flew the rebuilt Langley airplane, with the original engine, off the water at Hammondsport, N. Y., for 150 feet.

1941—A spinproof private plane, designed for General Aircraft Company, was demonstrated in Newark, N. J.

May 29

1910—Glenn H. Curtiss made a record flight of 142.5 miles from Albany to New York in 2 hours 50 minutes, winning the American Scientific Trophy for the third time, giving him permanent possession.

1918—Brig. Gen. Mason M. Patrick was appointed Chief of Air Service, AEF.

1934—The Collier Trophy for 1933 was awarded to the Hamilton Standard Propeller Company, with particular credit to Frank W. Caldwell for the development of controllable pitch propeller.

1951—Capt. Charles F. Blair, Jr., Pan American Airways, flew across the North Pole in a converted P-51, the first man to make the trip alone and in a single-engine plane.

May 30

1912—Wilbur Wright died at Dayton, Ohio.

1913—MIT's aerodynamics course was instituted under Assistant Naval Constructor Jerome C. Hunsaker.

1932—The National Elimination Balloon Race was won by Lt. Wilfred J. Paul and Lt. K. J. H. Bishop, flying a distance of 901.4 miles from Omaha, Neb., to Hatton, Saskatchewan, Canada, in 29 hours 15 minutes, establishing new distance and duration records for balloons of 35,000 cubic feet capacity.

1958—The USAF disclosed the development of an air-to-air atomic missile, the GAR-9.

May 31

1908—Glenn H. Curtiss Manufacturing Company at Hammondsport, N. Y. announced that it was equipped to accept orders for and deliver flying machines in 60 days at \$5,000 per plane.

1935—Hickam Field, near Fort Kamehameha, Hawaii, was dedicated. Maj. Gen. George H. Brett was appointed Chief of the Air Corps.

1944—First launching of the experimental VB-7 vertical bomb, incorporating television.

JUNE

June 1

1919—In response to a request from the District Forester, San Francisco, the first

organized and sustained aerial forest fire patrol was initiated at Rockwell Field, Calif. The patrol used Curtiss JN4D and JN6H planes.

1934—Army Air Corps air mail operations were terminated.

1939—Inauguration of the plan to utilize civilian flying schools for the primary training of Air Corps flying cadets.

1950—The USAF was authorized to organize the Ground Observer Corps.

June 2

1917—The Aviation Section became the Airplane Division, Signal Corps.

1944—The first shuttle bombing mission utilizing the Soviet Union as eastern terminus was flown. Lt. Gen. Ira C. Eaker, head of the Mediterranean Allied Air Forces, flew in one of the B-17's.

1949—Gen. Henry H. Arnold was given permanent rank of General of the Air Force.

1954—With test pilot J. F. Coleman at the controls the Convair XFY-1, a vertical take-off aircraft, made the first free vertical take-off and landing at Moffett Naval Air Station, Mountain View, Calif.

1959—An altitude-endurance record for manned, lighter-than-air craft was established by Capt. Joseph W. Kittenger, Jr., USAF, who remained aloft in a balloon over Minnesota for 6 hours 34 minutes, being above 96,000 feet for 2 hours.

June 3

1941—The grade of aviation cadet was created.

1942—AAF units participated in the opening phases of the Battle of Midway.

1946—Lt. Henry A. Johnson, flying a P-80, set a world record of 1 hour 20 minutes 31 seconds for a 1,000-kilometer course, averaging 462 mph.

June 4

1907—Cpl. Edward Ward, the first non-commissioned officer in the Army's newly created balloon organization (which later became the Aeronautical Division of the Signal Corps) was detailed for instruction in balloon manufacture.

1920—Approval of Army Reorganization Bill which created an Air Service with 1,514 officers and 16,000 enlisted men. The new rating of "Airplane Pilot" superseded former ratings; flying pay of 50 percent above base pay was authorized.

1927—Clarence D. Chamberlin and passenger made the first nonstop flight to Germany, a distance of 3,911 miles, in 43 hours 49 minutes 33 seconds, in a Bellanca-15 Wright 200.

1930—Lt. Apollo Soucek, USN, flying a Wright Apache, set a new world altitude record of 43,166 feet at the Naval Air Station, Anacostia, D. C.

1954—Maj. Arthur Murray attained a height of 91,000 feet in the Bell X-1A.

June 5

1909—The first National Balloon Race was won by John Berry and Paul McCullough; Indianapolis to Fort Payne, Ala., a distance of 377.9 miles, in 25 hours 35 minutes.

1912—Lt. Col. C. B. Winder, Ohio National Guard, became the first National Guard pilot. He was taught to fly at the Army School, Augusta, Ga.

1920—An appropriation bill limited Air Service to land bases.

June 6

1936—The Socony-Vacuum Oil Company, Inc., at Paulsboro, N. J., began production of aviation gasoline (100 octane) by the catalytic cracking method.

1938—The Daniel Guggenheim Medal for 1938 was awarded to A. H. R. Fedden for "contributions to the development of aircraft engine design and for the

specific design of the sleeve valve aircraft engine."

1944—D-day effort of the U. S. Air Forces unprecedented in concentration and size with Allied aircraft flying approximately 1,000 sorties.

June 7

1908—The first aviation column in an American newspaper was begun in the Sunday editions of the *Philadelphia Inquirer* by John Trevor Custis, managing editor.

1912—First firing of a machine gun from an airplane in the United States. The gun, a ground type designed by Col. Issac N. Lewis, was fired by Capt. Charles deForrest Chandler from a Wright B plane, piloted by Lt. T. D. Milling at College Park, Md.

1912—1st Lt. John P. Kelley, MRC, the first air medical officer, was assigned to Signal Corps aviation field, College Park, Md.

1936—An all-instrument transcontinental flight was completed by Maj. Ira C. Eaker and William E. Kepner between New York and Los Angeles.

June 8

1907—First aeronautic exhibit building was dedicated at the Jamestown Exposition, Jamestown, Va.

1911—The Connecticut state fair regulation was the first state air law.

1920—A new unofficial world record parachute jump of 19,861 feet was made by Lt. John H. Wilson over San Antonio.

1921—The first flight of an Army Air Service pressurized cabin airplane was made.

1954—The USAF announced that at Holloman AFB, New Mex., the previous March Lt. Col. John P. Stapp had traveled at a record speed (on the ground) of 421 mph in a rocket-powered sled along a 3,500-foot track.

June 9

1945—A total of 110 B-29's completed a precision attack on aircraft factories at Nagoya, Osaka, and Kobe, Japan.

1951—Maj. Gen. Archie W. Old, Jr., assumed area command of all USAF units and organizations in French Morocco.

June 10

1908—The Aeronautical Society, the first of its kind, was formed in New York. Morris Park airfield was later obtained for the use of the club.

1909—President Taft presented Aero Club of America medals to the Wrights at the White House.

1948—The Air Force confirmed repeated attainment of supersonic speeds by X-1 (formerly XS-1) flown by Capt. C. E. Yeager.

June 11

1930—(11 June-4 July) World endurance record of 553 hours 41 minutes 30 seconds was established by John and Kenneth Hunter.

1943—The Pantelleria garrison surrounded without firing a shot, becoming the first large defended area to be conquered by air power.

1951—Navy D-558-2 Douglas Skyrocket, flown by test pilot William Bridgeman, set a new world airplane speed and altitude record at Edwards AFB, Calif. Exact figures withheld—speed unofficially estimated at more than 1,200 mph; altitude estimated 70,000 feet. (See also Aug 7 and Aug 15.)

June 12

1913—The first Curtiss tractor, Signal Corps No. 21, was accepted by the Army.

1918—The first American Expeditionary Forces day bombing was done by the 96th Aero Squadron from Amanty air-drome in France on Dommary-Baroncourt yards.

1942—12 B-24's bombed the Ploesti oil refineries in the first AAF blow against a strategic target in the Middle East.

1958—A USAF KC-135 Stratotanker set an unofficial coast-to-coast speed record for transport aircraft in flying from Los Angeles to New York in 3 hours 42 minutes 45 seconds.

June 13

1910—(13-18 June) The Indianapolis Air Meet was held at the Speedway; the Wright Exhibition Team flew for the first time.

1910—Charles K. Hamilton flew from New York to Philadelphia and return to win the *New York Times* prize of \$10,000 (149.5 miles in flying time of 3 hours 27 minutes).

1944—The first German V-1's fired in combat were launched from France against England with 4 of the 11 striking London.

June 14

1912—Cpl. Vernon Burge became the Army's first enlisted pilot.

1919—(14-15 June) First nonstop Atlantic crossing from St. Johns, Newfoundland, to Clifden, Ireland, 1,936 miles, was accomplished by Capt. John Alcock and Lt. A. W. Brown of England in a Vickers-2 Rolls 400, in 15 hours 57 minutes. They divided the \$50,000 *London Daily Mail* prize.

1949—A monkey endured a rocket flight to a height of 83 miles, but a malfunctioning parachute caused its death on impact.

1957—In flying an Aero Commander 680 to a height of 30,330 feet at Tulsa, Oklahoma, Aviatrix Jerril Cobb established a world altitude record for light 2-engine planes.

June 15

1944—The first B-29 strike was made against Japan; 47 B-29's of XX

Bomber Command, flying from bases in Chengtu, China, area, struck Yawata.

June 16

1917—The first contingent of aviation personnel (93 skilled civilian mechanics) to go overseas in World War I sailed for England. The personnel were to study British and French airplanes and manufacturing methods and then return to the United States.

1922—Night cross-country flights, Bolling Field, D. C., to Langley Field, Va., and return, were initiated by Lt. C. L. Bissell.

1922—The first United States helicopter flight of importance was made by Henry Adler Berliner at College Park, Md., before representatives of the U. S. Bureau of Aeronautics.

1928—Successful tests were made at Wright Field, Dayton, Ohio, of superchargers designed to give sea level pressure at 30,000 feet, and a new liquid oxygen system for high altitude flying.

June 17

1909—Special Congressional Medal was presented to Orville and Wilbur Wright.

1917—Aeronautical Mission, Aircraft Production Board (known as the Bolling Mission) under Maj. R. C. Bolling, sailed for Europe.

1952—ZPN-1, the world's largest non-rigid airship, 324 feet long and 35 feet high, was delivered to the Navy at Lakehurst, N. J., by Goodyear Aircraft Company.

June 18

1916—H. Clyde Balsley of the Lafayette Escadrille was shot down near Verdun, France; he was the first American aviator shot down in World War I.

1928—Amelia Earhart, first woman to cross the Atlantic by air, arrived in England in an airplane piloted by Wilmer Stultz.

1942—Maj. Gen. Carl Spaatz assumed command of the Eighth Air Force in England.

June 19

1947—A world speed record of 623.8 mph was established by Col. Albert Boyd, flying a P-80R jet-propelled airplane over a 3 kilometer course at Muroc, Calif.

June 20

1913—Ensign W. D. Billingsley became the first naval aviator to be killed in a plane when he was thrown from a Navy Wright B2 seaplane and drowned.

1923—First flight of the first all-metal plane, Gallaudet CO 1, Liberty 400, designed by the Air Corps engineering division.

1934—The Daniel Guggenheim Medal was presented to William E. Boeing for his achievements in air transportation and aircraft manufacture.

1941—Establishment of the Army Air Forces, comprising the Office of the Chief of Air Corps and the Air Force Combat Command (formerly GHQ Air Force), with Maj. Gen. H. H. Arnold named as Chief of Army Air Forces.

1951—USAF announced the first launching of B-61 Martin Matador (pilotless aircraft) at the Missile Test Center.

June 21

1908—The *June Bug*, third plane of Dr. Bell's Aerial Experiment Association, was flown by Glenn H. Curtiss, the designer.

1912—Tiny Broadwick, jumping from Glenn L. Martin's plane near Los Angeles, became the first woman to make a parachute jump from an airplane in the United States.

1930—Randolph Field, San Antonio, Tex., was dedicated.

1957—A USAF precision team consisting of six F-100C Super Sabre interceptors completed a flight from Kindley AFB, St. George, Bermuda to Bedford, Mass., (683 nautical miles) in the record time of 1 hour 13 minutes.

June 22

1909—The first airplane sales agency in America was established by Wykoff, Church, and Partridge, a New York automobile sales concern.

1915—The first aerial forest patrol took place when Wisconsin State Forester, E. M. Griffith, was flown by Jack Vilas to observe a forest fire.

1946—The first jet-powered air mail delivery was made in two Army P-80's, one flying from Schenectady, N. Y., to Washington, D. C., and the other from Schenectady to Chicago.

June 23

1924—A daylight transcontinental flight, New York to San Francisco, in PW8-D12 Curtiss 375, was made by Lt. R. L. Maughan: 2,670 miles in 21 hours 48 minutes 30 seconds, including 5 brief refueling stops.

1931—Wiley Post and Harold Gatty left New York on their round-the-world flight in the *Winnie Mae* (Lockheed-PW550). They completed the trip on 1 July, having flown 15,474 miles in 8 days 15 hours 51 minutes.

1938—President Roosevelt signed the Civil Air Authority Act.

1942—The first flights under BOLERO (build-up of the U. S. Air Forces in Europe) left Presque Isle, Maine, for England.

June 24

1914—The first Curtiss J tractor (Signal Corps No. 29) was received at San Diego. It was the forerunner of the "Jennies."

1943—Lt. Col. William R. Lovelace made a record parachute jump of 40,200 feet, near Ephrata, Wash.

1954—Harold E. Talbott, Secretary of the Air Force, announced that the permanent location of the Air Force Academy would be a 15,000-acre tract of land six miles north of Colorado Springs, Colo.

June 25

1934—Richard C. du Pont set a glider distance record of 158.299 miles from Elmira, N. Y., to Basking Ridge, N. J., in a Du Pont Bowlus sailplane.

1937—First nonstop transcontinental amphibian flight was made by Richard Archbald in a PBY-1 Catalina from San Diego to New York.

1943—130 B-17's in the heaviest single attack made to date by Northwest African Air Forces, dropped more than 300 tons of bombs on Messina, Sicily.

1951—USAF Arnold Engineering Development Center at Tullahoma, Tenn., was dedicated by President Truman. The Center was designed to provide facilities for testing and evaluating supersonic aircraft and guided missiles.

June 26

1909—Glenn H. Curtiss' first exhibition flights, at the Aeronautic Society's meet at its Morris Park aerodrome, in the first Curtiss plane, also were the first airplane flights over New York City.

1948—Berlin Airlift (Operation VITTLES) was initiated as a response to ground blockade imposed by Russia on Berlin.

June 27

1909—Three New York newspapers—The *Sun*, *Times*, and *Herald*—printed the first advertisements in the world of a practical airplane for sale.

1923—The first complete pipeline refueling between two airplanes was made by Capt. L. H. Smith and Lt. J. P. Richter at San Diego.

1950—President Truman announced that he had ordered USAF to aid South Korea, which had been invaded by North Korean Communist forces.

1950—The first enemy plane shot down in Korean War was shot down by 1st Lt. William G. Hudson, USAF, flying an F-82. The enemy plane was a YAK-9.

1957—The SM-73 (Goose) was the first plastic airframe missile to fly. It was

also the first missile to complete count-down, launch, and flight on the first attempt.

1958—Two USAF KC-135 Stratotankers set west-east transatlantic speed records in flying from New York to London in just under 5 hours 30 minutes. Returning on 30 June in just under 5 hours 54 minutes they established east-west transatlantic speed records.

1958—At Cape Canaveral, Fla., a USAF strategic missile squadron successfully completed the first military launching of a Snark intercontinental missile.

June 28

1917—Langley Field, Va., was authorized as an experimental air station.

1927—(28-29 June) The first nonstop Hawaiian flight, from Oakland, Calif., to Wheeler Field, Honolulu, was made by Lts. L. J. Maitland and A. F. Hegenberger in a Fokker C2-3 Wright 220. They flew 2,407 miles in 25 hours 50 minutes with navigation accomplished by directional beacons of San Francisco and Maui. The Mackay Trophy for 1927 and DFC were awarded for the flight.

1934—A contract made with Boeing Aircraft Company for design of B-17.

1946—The first V-2 rocket, fully instrumented for upper-air research, was launched from White Sands Proving Ground, N. Mex. It attained a height of 67 miles.

1957—The first phase of Project Far Side was completed, with the lifting by the world's largest balloon of a load of almost two tons of military equipment and instruments to a height of more than 104,000 feet.

June 29

1909—Trial flights of the new Army airplane, with Orville Wright at the controls, began at Fort Myer, Va.

1927—(29 June-1 July) Lt. Comdr. Richard E. Byrd, Lt. G. O. Noville, Bert Acosta and Bernt Balchen, in the airplane

America, established a record 4-passenger flight. They flew from Roosevelt Field, N. Y., to Ver-Sur-Mer, France (about 125 miles from Paris), an airline distance of 3,477 miles, in 46 hours 6 minutes.

1936—World's air-line distance record for amphibians was set by Maj. Gen. Frank M. Andrews and Maj. John Whitely and crew in a Douglas YOA5-2 Wright 800 in flight from San Juan, Puerto Rico, to Langley Field, Va., a distance of 1,429.685 miles.

1955—The first Boeing B-52 Stratofortress to go into operational service in the U. S. Air Force was delivered to the 93d Bomb Wing at Castle AFB, Calif.

1956—An Aerobee-Hi rocket manufactured by Aerojet-General Corp. attained an altitude of 163 miles in a launching from White Sands, New Mexico.

June 30

1917—Lt. Col. William Mitchell became Aviation Officer, AEF, relieving Maj. T. F. Dodd.

1928—(30 June-1 July) International Gordon Bennett Balloon Race, Detroit, was won by the United States for the third successive time, insuring permanent possession of trophy; pilot, Capt. W. E. Kepner; aide, Lt. W. O. Eareckson; distance, 460 miles.

1950—President Truman authorized General MacArthur to dispatch air forces against targets in North Korea.

1951—The Long Range Proving Ground Division, under ARDC jurisdiction since May 14, 1951, was redesignated the Air Force Missile Test Center.

1953—Gen. Nathan F. Twining became Chief of Staff, USAF, succeeding Gen. Hoyt S. Vandenberg.

JULY

July 1

1924—Through transcontinental air mail service was begun by U. S. Post Office.

1937—Weather service was transferred

from the Signal Corps to the Army Air Corps.

1941—The first AAF overseas air transport services was opened with the flight of a B-24, piloted by Lt. Col. C. V. Haynes from Bolling Field, D. C., to Scotland, via Montreal and Newfoundland.

1946—B-29 Dave's Dream dropped a Nagasaki-type atom bomb from 30,000 feet on 73 vessels off Bikini Atoll on Able Day of Operation CROSSROADS. Results showed 5 ships sunk and 9 heavily damaged.

1954—The USAF established the Western Development Division (now Air Force Ballistic Missile Division) at Inglewood, Calif., under Brig. Gen. Bernard A. Schriever, with authority to direct the ballistic missile development program authorized by its May 1954 directives.

1957—Gen. Thomas D. White became the fourth Chief of Staff, USAF, succeeding Gen. Nathan F. Twining.

1957—The 704th Strategic Missile Wing, the USAF's first, was activated at Cooke AFB, Calif., to train with the Snark missile.

July 2

1926—The first known reforestation by airplane was carried out in Hawaii.

1926—The Air Corps Act became law and the Air Service was redesignated the Air Corps. It also made provision for an Assistant Secretary of War for Air and for a five-year Air Corps expansion program.

1926—Congress established the Distinguished Flying Cross (made retroactive to 6 April 1917).

1943—Lt. Charles Hall became the first United States negro flier to shoot down an Axis plane, a German Focke-Wulf 190 over Sicily.

1952—The Air Force disclosed a new jet fighter, the Lockheed F-94C Starfire, the first Air Force fighter to be armed solely with rockets.

1955—The biggest troop airlift in history

began at Donaldson AFB, S. C., resulting in a movement of 3,900 paratroopers from the United States to Japan and 3,100 from Japan to the United States.

July 3

1915—Lt. B. Q. Jones, at San Diego, became the first Army officer to loop a plane.

1936—Henry Ford bought, for Greenfield Village exhibit, the old shop in Dayton, Ohio, where the Wright Brothers invented the airplane.

1949—B-29 *Enola Gay*, plane which dropped atomic bomb on Hiroshima, was presented to the Smithsonian Institution.

July 4

1908—The first American air trophy offered by the *Scientific American* for the first official flight of 1 kilometer was won by Glenn H. Curtiss at Hammondsport, N. Y., in the *June Bug* in 1 minute 42.5 seconds. This trial was the first "official" test of an airplane ever made in America, timed and measured by a representative of the Federation Aeronautique Internationale (F. A. I.).

1939—Lt. Robert M. Stanley, USN, set an American altitude record for single-place gliders when he soared to 17,263.743 feet at Elmira, N. Y.

1942—The first AAF combat bomber mission over Europe in World War II was flown against 4 airdromes in Holland by 6 crews of the 15th Bombardment Squadron (S) in American-built Bostons belonging to the RAF.

July 5

1911—The first flight form (Form No. 277) was approved by the Chief Signal Officer. Its use was inaugurated at the Army's school at Augusta, Ga.

1912—Capt. C. deF. Chandler and 2d Lts. T. D. Milling and H. H. Arnold became the first fliers to qualify as "Military Aviators."

1952—A world record of 124 parachute jumps in one day was set at Grand

Prairie, Tex., by Paratrooper Neal Stewart of Birmingham, Ala.

July 6

1908—An Aeronautical Board of the Signal Corps was appointed "for conducting tests of dirigibles, balloons, and airplanes under existing contracts."

1915—Capt. V. E. Clark, the first air officer to graduate from MIT as a Doctor of Aeronautical Engineering, reported at North Island, San Diego.

1950—James H. Doolittle was named aviator of the decade by the Harmon International Aviation Awards Committee; Jacqueline Cochran named outstanding aviatrix; Vice Adm. Charles E. Rosendahl cited as top aeronaut (lighter-than-air man).

July 7

1914—Dr. Robert H. Goddard was granted a U. S. patent for two-stage solid-fuel rocket. (This was the first of 69 patents granted to the father of American rocketry.)

1920—An F-5L Navy seaplane was flown by radio compass from Hampton Roads Va., to the USS *Ohio*, at sea.

1929—Forty-eight hour transcontinental train-plane service was inaugurated by Transcontinental Air Transport, Inc.

1942—A B-18 of the 396th Bombardment Squadron attacked and sank a German submarine off Cherry Point, N. C., in the first sure "kill" off the Atlantic coast by aircraft.

July 8

1913—The first long-distance cruise on a flying boat was begun by Beckwith Havens in a Curtiss, flying 885 miles on the Great Lakes.

1940—Three Air Corps Training Centers were established: Randolph Field, Texas, Maxwell Field, Ala., and Moffett Field, Calif.

1940—Beginning of the first commercial flight of the Boeing 307-B Stratoliner,

Burbank, Calif., to Long Island, N. Y. This was also the first commercial flight to use a pressurized cabin.

1943—Col. Malcolm G. Grow, Surgeon, Eighth Air Force, received the Legion of Merit for developing a "flak vest" and steel helmet to deflect low-velocity missiles from American airmen.

1955—The first test run was held on the Supersonic Military Air Research Track (SMART), a 12,000-foot track for rocket-propelled sleds at Hurricane, Utah.

July 9

1910—The first aviator to fly to a height of one mile, Walter R. Brookins, attained a height of 6,175 feet in a Wright biplane at Atlantic City, N. J., winning the Atlantic City Aero Club prize of \$5,000.

July 10

1911—National Balloon Race, Kansas City, Mo., was won by Lt. Frank P. Lahm, landing at La Paz, Ind., a distance of 772.486 kilometers.

1938—Howard Hughes, pilot, and a three-man crew began a flight around the world: New York, Paris, Moscow, Omsk, Yakutsk, Fairbanks, Minneapolis, New York, 14,791 miles, 3 days 19 hours 8 minutes.

1943—Allied airborne troops landed at Gela and Syracuse, Sicily, in the first large scale airborne operation attempted by the Allies in World War II.

1950—Erection of the Pinetree radar network on Canadian soil was agreed to in a joint RCAF-USAF conference July 10-11.

July 11

1914—The National Balloon Race, St. Louis, Mo., was won by R. A. D. Preston, landing at Pt. Pleasant, Ky., a distance of 485.732 kilometers.

1955—The Air Force Academy was dedi-

cated at its temporary location, Lowry AFB, Denver, Colo., and the first class, consisting of 306 cadets, was sworn in.

July 12

1915—A board of officers at San Diego adopted Aviation Mechanician examination requirements.

1940—Pan American *Alaskan Clipper*, a Sikorsky S-42B, made the first flight from the United States to Alaska (Seattle-Juneau).

1940—Pan American made the first air mail delivery to Auckland, New Zealand, over a new route connecting the United States with Australia by way of Honolulu, Canton Islands, and New Caledonia. (Passenger service over this same route began on 11 September 1940.)

July 13

1916—The First Aero Company, National Guard, New York, was the first National Guard air unit to be taken into the Federal Service.

1921—(13-21 July) In a series of Army-Navy bombing tests, airplanes sank the captured German destroyer *G-102*, light cruiser *Frankfort*, and battleship *Ostfriesland*, proving the vulnerability of naval craft to aerial attack.

July 14

1922—Aeromarine Airways started Detroit-Cleveland flying boat service.

1926—The Armstrong seadrome model was demonstrated at Wilmington, Del., to Air Service personnel.

1945—A-20's from Hollandia set fire to Japanese oil fields at Boela, Ceram, in the first use of rocket bombs in the Southwest Pacific.

1952—The Ground Observer Corps (GOC) initiated its 24-hour-a-day Skywatch program as part of a nationwide air defense effort.

July 15

- 1925—The Dr. A. Hamilton Rice Expedition, the first to employ a plane in exploration returned from the Amazon; Lt. Walter Hinton piloted the Curtiss Seagull plane.
- 1933—Wiley Post began the first solo round-the-world flight, flying 15,596 miles in 7 days 18 hours 49½ minutes.
- 1954—The first jet powered transport built in the United States, the Boeing 707, the prototype for the military Stratotanker and the commercial Stratoliner, was flight-tested near Seattle, Wash.

July 16

- 1926—F. Trubee Davison was appointed as first Assistant Secretary of War for Air.
- 1940—The first bombardier training in Air Corps Schools was begun at Lowry Field, Colo., with the entrance of the first class of bombardier instructors.
- 1945—The U. S. Army Strategic Air Force in the Pacific was established under the command of Gen. Carl Spaatz.
- 1945—Maj. Gen. Curtis LeMay assumed command of the Twentieth Air Force.
- 1953—Flying an F-86D Sabrejet fighter over a 3-km. course at Salton Sea, Calif., Lt. Col. William F. Barnes, USAF, set a world air speed record of 715.5 mph.
- 1953—Climbing to a height of 37,063 feet in a Cessna L-19B at Wichita, Kans., test pilot William Thompson established a world altitude record for light aircraft.

July 17

- 1908—The world's first aviation legislation (municipal ordinance regulating aircraft within the city limits) was enacted at Kissimmee, Fla.
- 1929—A liquid-fueled 11-foot rocket, fired by Dr. Robert H. Goddard at Auburn, Mass., carried a small camera and a barometer. Both were recovered intact after the flight.
- 1948—B-29's arrived in England for train-

ing at British bases. These were the first United States bombers to be based in the United Kingdom after World War II.

- 1952—A Record transoceanic mass jet flight was completed by 58 F-84 Thunderjets of the 31st Fighter Escort Wing. The flight, under Col. David C. Schilling, left Turner AFB, Ga., on 4 July and landed at Yokota AFB, Japan, on 16 and 17 July after flying 10,895 miles with only 7 stops, and refueling in the air over the long stretches.

July 18

- 1914—The Aviation Section, Signal Corps, was created by Congress with Lt. Col. Samuel Reber (head of Aeronautical Division since 20 October 1913) in charge.
- 1938—Douglas (Wrong-Way) Corrigan arrived in Dublin, Ireland, 28 hours 13 minutes after leaving New York in a 9 year old Curtiss Robin.
- 1947—President Truman designated a five-man Air Policy Committee, with Thomas K. Finletter of New York as chairman, to submit by 1 January 1948 a broad plan to give the United States the "greatest possible benefits from aviation."

July 19

- 1911—The first Navy Wright airplane was delivered at Annapolis by Orville Wright.
- 1913—Sky writing was initiated by the Bryant brothers when Milton J. (Johnny) Bryant wrote "SP" in fire over Seattle on the last night of the Seattle Potlach celebration.
- 1934—(19 July-20 August) 10 Martin B-10's were flown from Bolling Field, D. C., to Fairbanks, Alaska, and return, Lt. Col. H. H. Arnold commanding. Distance, 8,290 miles. Flying time: north-bound, 25 hours 30 minutes; south-bound, 26 hours. The Mackay Trophy

July 20-24

and the DFC were awarded to Lt. Col. Arnold.

1947—John Robinson set a United States glider distance record of 33 miles, Wichita Falls to Barstow, Tex.

1952—USAF announced first successful flying of balloons at controlled constant altitudes in the stratosphere for periods of more than three days.

1957—The USAF fired its first air-to-air nuclear defense rocket, the Douglas-built MB-1 Genie, from an F-89J over Yucca Flat, Nev.

July 20

1918—148th Pursuit Squadron began operations with the RAF in the field from the Capelle Airdrome, near Dunkirk, France.

1937—The first shoulder sleeve insignia was authorized for an independent American air unit—for General Headquarters Air Force.

1948—Sixteen F-80's reached Scotland in the first west-to-east transatlantic flight by jet planes. Time from Selfridge Field, Mich.: 9 hours 20 minutes.

1955—The NB-36H airplane, housing an atomic reactor, made its first flight. The reactor was not activated.

July 21

1910—Experimental flights were made at Dayton by Orville Wright with a wheeled chassis comprising a set of twin wheels attached to each skid.

1946—The McDonnell XFH-1 Phantom was first United States jet to operate from a carrier (USS *Franklin D. Roosevelt*).

1953—At San Diego the Navy publicly demonstrated the world's first jet fighter seaplane, the *Sea Dart* equipped with hydro skis.

July 22

1930—A German airmail plane catapulted from shipboard when 250 miles out en route to New York.

1935—The Collier Trophy for 1934 was presented to Capt. Albert F. Hegenberger for development and demonstration of a successful blind landing system.

1944—The first all fighter shuttle raid was made by Italy-based U. S. Lightnings (76) and Mustangs (58) of the Fifteenth Air Force which attacked Nazi airfields in Rumania at Bazau and Zilistea, northeast of Ploesti. The planes landed at Russian bases.

July 23

1908—The Army's first airship and a hydrogen plant were delivered by Thomas S. Baldwin at Fort Myer, Va.

1914—SO 171 appointed a board of officers at the North Island Aviation School, San Diego, to examine candidates for the new aviation mechanic rating.

1917—Maj. B. D. Foulois assigned as officer in charge of the Airplane Division.

1948—MATS was ordered to establish an Airlift Task Force with headquarters in Germany for the relief of Berlin. Maj. Gen. William H. Tunner was named to command Task Force operations.

1956—At Edwards AFB Test Center, Muroc, Calif., Lt. Col. Frank K. Everest, USAF, flew a Bell X-2 rocket-powered plane at a record speed of just over 1,900 mph.

July 24

1917—The first great air appropriation (\$640,000,000) authorized the Aviation Section to expand to 9,989 officers and 87,083 enlisted men.

1919—(24 July-9 November) Coastal-and-border-circuit flight of the United States was completed by Lt. Col. R. S. Hartz and Lt. E. E. Harmon and crew in Martin Bomber-2 Liberty 400, a distance of 9,823 miles with flying time of 114 hours 25 minutes.

1950—The first rocket (a WAC Corporal mounted on a V-2) was fired from Cape Canaveral, Fla.

July 25

1909—Louis Bleriot, of France, became the first person to fly across the English Channel. He started at Les Barrages, France, and landed at Dover, England. Later, Bleriot planes were flown in the United States.

1912—Navy airplane specifications were published.

1927—A world airplane altitude record of 38,418 feet was established by Lt. C. C. Champion, USN, in a Wright P&W 425.

1944—Over 2,4000 bombers attacked German positions in front of the American lines at St. Lo over a 3-hour period.

July 26

1915—1st Aero Squadron, under Capt. B. D. Foulois, left San Diego, for Fort Sill, Okla., for fire control operations with the Field Artillery.

1937—Jacqueline Cochran, flying a Beechcraft, set a women's United States speed record of 203.895 mph for 1,000 kilometer course.

1947—President Truman signed the Armed Forces Unification Act, creating a Department of the Air Force, co-equal with Army and Navy, and creating a National Military Establishment under the Secretary of Defense.

1951—The three U. S. armed services agreed to the creation of Project Lincoln, an armed forces-supported and M.I.T.-managed study of the air defense program.

1954—Lt. Gen. Hubert R. Harmon was appointed the first superintendent of the Air Force Academy.

July 27

1909—Orville Wright, with Lt. Frank P. Lahm as passenger, made a new 2-man world endurance record of 1 hour 12 minutes 40 seconds, fulfilling the condition of hour's flight with a passenger in the first official test flight of the Army's first airplane.

1917—Secretary of Navy authorized a Naval aircraft factory at Philadelphia.

1917—The first British DH-4 arrived in the United States and was the model for the first American service planes put into production with Liberty engines.

July 28

1917—The first American Aero Squadron to arrive in the American Expeditionary Forces, the 29th Provisional (later 400th Construction Squadron) docked at Liverpool.

1931—(28-30 July) Russell N. Boardman and John Polando set a new airline, nonstop, non-refueled distance record by flight of 5,011.8 miles in Bellanca monoplane from Floyd Bennett Field, N. Y., to Istanbul, Turkey.

1934—A 60,613-foot altitude was reached in Air Corps-National Geographic Society Stratosphere Balloon Flight by Maj. W. E. Kepner and Capt. A. W. Stevens and O. A. Anderson; all received DFC's.

1938—A 278 mph average speed in transcontinental flight was achieved by Lt. H. L. Neely in a Seversky P-35 in 9 hours 54 minutes flying time; elapsed time: 11 hours 29 minutes.

1953—A USAF B-47 Stratojet bomber set a transatlantic speed record in completing a 2,925-mile flight from Limestone AFB, Maine, to Fairford, England, in 4 hours 43 minutes, an average of 618 mph.

July 29

1912—(29 July-7 August) A series of airplane radio-telegraph tests were carried out by Lt. B. D. Foulois in an Army Wright B at College Park. Messages were received for a distance of 10 miles.

1955—The White House, through Presidential Press Secretary James C. Haggerty, announced U. S. plans to launch a basketball-sized earth satellite during

the International Geophysical Year
(July 1957-December 1958).

July 30

1909—The second test of the Army Wright plane was completed. A 10 mile cross-country flight over a stipulated course from Ft. Myer to Alexandria, Va., and back, at speed of 42.583 mph, for which the Wrights received a bonus of \$5,000 (10 percent of base price of \$25,000 for each mile over 40), making the purchase price \$30,000. The plane was formally accepted on 2 August 1909.

1939—The United States regained world record for payload-carrying when Maj. C. V. Haynes and Capt. W. D. Old flew the Army Boeing B-15 to 8,200 feet with payload of 15½ tons, at Wright Field, Ohio.

July 31

1908—Henry Farman made his first exhibition flights in the United States in his Farman plane.

1912—The first catapult launching of an airplane was demonstrated by Navy pilot Lt. T. G. Ellyson, using a catapult designed and built by Capt. W. I. Chambers, USN. The plane lifted from its platform on the seawall at Annapolis, Md., but immediately dived into the water.

1952—Two USAF MATS Sikorsky H-19 helicopters completed first transatlantic helicopter flight, having flown in five stages from Westover Field, Mass., to Prestwick, Scotland.

1957—The DEW Line, a distant early-warning radar defense installation extending across the Canadian Arctic, was reported to be fully operational.

AUGUST

August 1

1907—The Aeronautical Division was established in Office of Chief Signal Officer. The Division, under Capt. Charles deF.

Chandler, was to have charge of all matters pertaining to military ballooning, air machines, and kindred subjects.

1943—Mediterranean based B-24's executed a low-level attack on the Ploesti oil refineries in Rumania in the first large scale minimum-altitude attack by AAF heavy bombers upon a strongly defended target; it was the longest major bombing mission in terms of distance of base to target undertaken to date.

1945—In the largest B-29 combat effort of any one day, 851 Superforts were airborne in strikes on 4 urban areas, a petroleum plant, and 5 mine fields.

1946—A B-29 set a United States east-west transcontinental speed record by flying from New York City to Burbank, Calif., in 7 hours 28 minutes 3 seconds.

1950—The Collins-Vandenberg Agreement established the leases for the cooperation of the Air Defense Command and the Army Antiaircraft Command in the air defense of the USA.

1951—In an exchange of diplomatic notes, Canada and the USA ratified an agreement which provided for cooperation between the two nations in the erection and operation of a radar defense network on Canadian territory.

1956—President Dwight D. Eisenhower signed into law a bill permitting the armed forces to include flight instruction in ROTC programs.

1957—NORAD, a joint U. S.-Canadian North American Air Defense Command, was informally established. The agreement was formalized by an agreement ratified May 12, 1958.

August 2

1911—Harriet Quimby became the first woman pilot in the United States to obtain an FAI certificate. She received No. 37 at Mineola, Long Island, N. Y.

1918—First patrol along the front by American built DH-4's with Liberty engines, when a patrol of 18 airplanes of the 135th Corps Observation Squadron

flew from the airdrome of Ourches, France.

1922—An unofficial 3-man altitude record of 23,350 feet was set at McCook Field, Dayton, Ohio, by Lt. L. Wade, Capt. A. W. Stevens, and Sgt. Longham in a supercharged bomber.

1946—The National Air Museum was established under the Smithsonian Institution.

August 3

1904—The first circuit flight in an airship was made by Capt. Thomas S. Baldwin at Oakland, Calif. The airship was equipped with a Curtiss motor.

1938—(3-12 August) A goodwill mission from Langley Field, Va., to Bogota, Columbia, was made by three B-17's of 2d Bombardment Group under Maj. Vincent J. Meloy.

1954—The U. S. Navy's F2Y-1 Sea Dart, a hydro-skifighter and the world's fastest water-based plane, exceeded the speed of sound in a test flight at San Diego, Calif.

August 4

1908—The first test ascent (lasting some 7 minutes) was made in Signal Corps airship No. 1, at Fort Myer, Va., with Thomas S. Baldwin at the controls and Glenn H. Curtiss as engineer.

1910—Elmo N. Pickerill claimed to have made the first plane-to-ground-to-plane radio-telegraphic communication in America, during a solo flight in a Curtiss pusher from Mineola, Long Island, to Manhattan Beach and return.

1925—The beginning of the MacMillan polar expedition, with Navy assistance consisting of Loening amphibians under Lt. Comdr. Richard E. Byrd.

1944—The first APHRODITE mission (radio controlled aircraft carrying 20,000 pounds of TNT) was flown against rocket sites in the Pas de Calais area.

1953—A USAF B-47 Stratojet bomber set a nonstop distance record for jet air-

craft in making a 4,450-mile flight from Fairford, England to MacDill AFB, Fla., in 9 hours 53 minutes.

August 5

1911—Lincoln Beachey won the New York-Philadelphia race for the Gimbel \$5,000 purse in elapsed time of 1 hour 50 minutes 18 seconds, with one stop for fuel.

1922—Lt. Clayton Bissell began the first model airway flight, Washington-Dayton-Washington.

August 6

1945—The atomic bomb was dropped on Hiroshima from the B-29 *Enola Gay*, under command of Col. Paul W. Tibbets, Jr.

1946—Two radio controlled B-17's, accompanied by control planes, made a 2,174-mile flight from Hawaii to Muroc Lake, Calif.

1948—The first B-29's to circumnavigate the globe landed near Tucson, Ariz., after a leisurely 15-day trip.

August 7

1916—The Wright Company and the Glenn L. Martin Company were merged into the Wright Martin Aircraft Corporation.

1951—A Navy Viking rocket set an altitude record for single-stage rockets; it climbed to 135 miles and reached a speed of 4,100 mph, at White Sands, N. Mex.

1951—Navy D-558-2 Skyrocket, piloted by Bill Bridgeman, reached a speed of 1,238 mph.

1954—The USAF revealed that the School of Aviation Medicine had previously received the "first piece of experimental equipment ever built specifically for the study of living conditions in space"—a sealed cabin, to simulate the interior of a spaceship.

Aug. 8-12

August 8

1903—The Langley gasoline engine model plane was successfully launched from a catapult on a houseboat.

1910—The first tricycle landing gear, built by civilian mechanic Oliver G. Simmons and Corporal Madole, was installed on the Army Wright in place of its original skids.

1946—The XB-36 made its first flight at Fort Worth, Tex. The first B-36 production model flew for the first time on August 26, 1947. The B-36D, the 10-engine version, flew initially on March 26, 1949.

1947—A. L. Berger of Wright Field, received the Thurman H. Bane Award for 1947 for work in developing new types of high temperature ceramic coatings for use in aircraft engines.

August 9

1945—The second atomic bomb was dropped on Nagasaki from *The Bock's Car* B-29 commanded by Maj. Charles W. Sweeney.

1952—A new nonstop distance record for very light planes was set by Bob Faris in a Mooney Mite by flight from Wichita, Kans., to Montpelier, Vt., 1,400 miles in 11 hours 59 minutes 30 seconds.

August 10

1912—At Bridgeport, Conn., from 10 August through 17 August, Signal Corps planes for the first time took part in Army maneuvers. The two planes were piloted by Lts. T. D. Milling and B. D. Foulois.

1914—The first Government license ever issued in America for aircraft went to "Tony" Jannus, hydroairplane pilot of St. Petersburg-Tampa Airline. The license was marked "Issue Number I," Serial No. 54578.

1921—The Navy Bureau of Aeronautics was formed with Rear Adm. William A. Moffett in charge.

1945—A total of 95 B-29's carried a record

average bomb load of 20,648 pounds per plane in a strike on Amagasaki, Japan.

1947—William P. Odom landed in Chicago after a record 73 hours 5 minutes 11 seconds solo round-the-world flight in a converted A-26 two-engine bomber, the *Reynolds Bombshell*. He spent 63 hours 15 minutes in the air and covered 19,645 miles.

1949—President Truman signed National Security Act amendments of 1949, revising unification legislation of 1947 and converting the National Military Establishment into the Department of Defense.

August 11

1906—Mrs. C. J. S. Miller became the first woman in the United States to fly in an airship (balloon) as a passenger. The 40 horsepower, 22,500 cubic foot airship was owned by her husband, Major Miller, of Franklin, Pa.

1931—Maj. John F. Curry assumed command of Air Corps Tactical School, which had been transferred from Langley Field, Va., to Maxwell Field, Montgomery, Ala.

August 12

1908—Lts. Lahm, Foulois, and Selfridge began official airship flights at Fort Myer, Va. The airship was accepted on 22 August, and was named Army Dirigible No. 1.

1941—The first successful rocket-assisted take-off of an airplane in this country took place on 12 August 1941.

1945—The Tenth Air Force on mission from bases in China attacked troops and convoys in the Changsha corridor, China.

1957—With Lt. Comdr. James M. Pruitt, USN, as the pilot a twin-jet A3D Skywarrior flew from Hawaii to California (2,438 miles) in 4 hours 12 minutes, a record for the eastward flight.

August 13

- 1917—The 1st Aero Squadron sailed for Europe under command of Maj. Ralph Royce, the first squadron to report for flying duty in the AEF.
- 1943—The Northwest African Strategic Air Force bombed Wiener Neustadt in the first mission from Italian bases against targets in greater Germany.
- 1944—Two GB-4 glide bombs, incorporating television and radio control, launched against E-boat pens at LeHavre, France. Four additional GB-4's were sent against targets in France and Germany between 17 August and 13 September 1944.
- 1952—The Air Force announced it had ordered the 8-jet Boeing B-52 heavy bomber into full-scale production.

August 14

- 1911—(14-25 August) Harry N. Atwood flew from St. Louis to New York, 1,155 miles, in the longest cross-country flight to date.
- 1919—First airmail delivered by Aeromarine flying boat to a steamer at sea, was delivered to the White Star Liner *Adriatic*.
- 1945—The last bombing mission of the Twentieth Air Force included a record number of effective aircraft (754 B-29's and 169 fighters); one phase of the mission, against Tsuchizaka, was the longest unstaged mission of the war from the Marianas (3,650 miles).

August 15

- 1929—(15-20 August) Lt. Nicholas B. Mamer and Arthur Walker in Buhl sesquiplane *Spokane Sun God*, with Wright Whirlwind engine, flew from Spokane, Wash., to the east coast and back, a record nonstop distance flight of 7,200 miles, being refueled in the air 11 times.
- 1935—Will Rogers and Wiley Post were killed in take-off crash near Point Barrow, Alaska.

- 1944—In the greatest one-day effort in the Mediterranean to date, Mediterranean Allied Air Forces flew 4,249 sorties including the landing of 9,000 airborne troops in southern France.
- 1951—At Muroc, Calif., Bill Bridgeman, Douglas test pilot, flew Navy D-558-2 Douglas Skyrocket to the highest altitude ever reached by a human being—79,494 feet.
- 1955—Donald A. Quarles assumed the duties of the Secretary of the Air Force, the fourth person to hold that position.
- 1957—Gen. Nathan F. Twining became Chairman of the Joint Chiefs of Staff, the first USAF officer to serve in that position.

August 16

- 1922—The Sperry airway light beacon was demonstrated at McCook Field.
- 1927—A. C. Goebel and Lt. W. V. Davis, USN, won the Dole Oakland-Honolulu race in 26 hours 17 minutes 33 seconds. No other plane completed the flight.
- 1947—Physicist Martin Pomerantz announced at Swarthmore College that he had sent a flight of 4 free balloons, carrying cosmic ray equipment, to a record height of at least 127,000 (possibly 129,000) feet.

August 17

- 1914—Official tests of the Scott bomb dropping device were begun by Capt. Goodier in the new Martin T at North Island School, San Diego.
- 1942—First American heavy bomber mission in Europe in World War II was flown by 12 B-17's of 97th Bombardment Group against Rouen-Sotteville yards in France.
- 1946—Sgt. Lawrence Lambert of Wright Field, Ohio, became the first person in the United States to be ejected from an airplane by means of an ejection seat. As part of a study of emergency escape equipment and techniques, he was ejected from a P-61 airplane trav-

eling 302 miles per hour at an altitude of 7,800 feet.

1949—The Senate ratified the Geneva international treaty regarding rights in aircraft.

1951—Col. Fred J. Ascani, flying an F-86E, set a world record of 735.686 mph for a 100-kilometer closed course.

1955—Ten USAF F-84F Thunderstreaks flew nonstop 5,118 miles from near London, England to Austin, Texas in 10 hours 48 minutes, setting a distance record for nonstop mass flight.

August 18

1911—P. O. Parmalee established a new American altitude record of 10,837 feet at the Chicago Air Meet.

1926—The first contract was let for a metal-clad airship.

1941—President Roosevelt announced agreements by which Pan American Airways would ferry war planes from the United States to British forces in the Middle East via West Africa.

August 19

1910—(19-28 August) New Yorkers saw the first real flying exhibition. It was put on by Glenn Curtiss at Sheepshead Bay Track, New York.

1928—(19-20 August) Arthur Goebel in a Lockheed-Vega monoplane flew cross-country from Los Angeles to Curtiss Field, Long Island, setting a new record of 18 hours 58 minutes (previous record was 26 hours 50 minutes 38 seconds).

1938—The first transcontinental nonstop flight by a B-18 bomber was made from Hamilton Field, Calif., to Mitchel Field, N. Y., in 15 hours 18 minutes.

1957—(19-20 August) Airborne for 32 hours, Maj. David G. Simons, USAF, established a manned-balloon altitude record of 102,000 feet, ascending at Crosby, Minnesota and landing at Elm Lake, South Dakota.

August 20

1910—U. S. Army Springfield .30 rifle was fired from an airplane by Lt. Jacob E. Fickel flying with Glenn H. Curtiss at Sheepshead Bay, N. Y.

1911—Lincoln Beachey set a new world altitude record of 11,642 feet at the Chicago Meet.

1935—Leslie R. Tower and a crew of 3, flew Boeing 299 bomber (prototype of B-17) for 2,100 miles from Seattle, Wash., to Dayton, Ohio, nonstop, at average speed of 232.2 mph.

1942—The Twelfth Air Force was activated at Bolling Field, D. C., in preparation for invasion of North Africa.

1953—Redstone missile No. 1 was fired by U. S. Army personnel at AFMTC, Cape Canaveral, Fla. (No. 2 was launched January 27, 1954.)

1953—Seventeen USAF F-84G Thunderjets flew nonstop 4,485 miles from Albany, Georgia to Lakenheath, England, the longest nonstop mass movement of fighter aircraft in history and the greatest distance ever flown nonstop by single-engine jet fighters.

1955—At Edwards AFB, Calif., Col. Horace A. Hanes, USAF, flying an F-100 Super Sabre, set a supersonic speed record for straightaway flight at 822.135 mph.

August 21

1923—First airways illumination, when 42 landing fields on the Chicago-Iowa City-Omaha-North Platte-Cheyenne Route were lit by 18- and 36-inch electric arc beacons, visible for 50 miles.

1943—The first Los Angeles-New York freight service was inaugurated.

1947—President Truman named W. Stuart Symington to be the first Secretary of the Air Force.

1948—Announcement was made that Gen. Carl Spaatz had disclosed in his final report, before retiring as Air Force Chief of Staff, that the United States was developing a supersonic guided atomic missile with a 5,000-mile range.

1956—Flying a F8U-1 Crusader over the Mojave Desert in California, Comdr. Robert W. Winslow, USN, set a speed record of 1,015.428 for U. S. combat planes.

August 22

1909—(22-29 August) At the first International Flying Meet, held at Rheims, France, Glenn H. Curtiss, flying one of his own Curtiss planes, won two first prizes (\$5,000 and \$2,000) and one second prize (\$600) in the speed competitions. Top speed was 45.7 mph.

1917—Air-to-ground radiophone sets went into the production stage.

1938—The Civil Aeronautics Act became effective, coordinating all non-military aviation under the Civil Aeronautics Authority.

August 23

1917—The 1st Reserve Aero Squadron, only squadron of its kind, sailed from New York to France. (It was later redesignated 26th Aero Squadron.)

1937—The first *wholly* automatic landings in history were made at Wright Field by Capt. Carl J. Crane, inventor of the system, Capt. George Holloman, pilot, and Mr. Raymond K. Stout, project engineer. The landing was made without assistance from the human pilot or from the ground. Crane and Holloman were awarded DFC's and the Mackay Trophy.

1956—A U. S. Army helicopter, the H-21, made the first transcontinental nonstop flight for helicopters, 2,610 miles from San Diego, Calif., to Washington, D. C., in 31 hours 40 minutes.

August 24

1935—Three new world speed-with-the-payload seaplane records were established in flights from Langley Field, Va., to Floyd Bennett Field, N. Y., and return, by Brig. Gen. F. M. Andrews in a Mar-

tin B-12W bomber with pontoon flotation gear replacing landing wheels.

1951—Congressional Medal of Honor was awarded posthumously to Maj. Louis J. Seville, USAF, of Chicago, who was killed 5 August 1951 near Hamchang, Korea. He attacked Red troops in his damaged plane until it crashed and was the first Air Force CMH winner in the Korean war.

1951—Air Force Chief of Staff Gen. Hoyt S. Vandenberg reported that the February 1951 Nevada atomic bomb tests had disclosed the development of a new atomic tactical weapon for use against armies in the field.

August 25

1916—Curtiss Marine Trophy was won by Victor Carlstrom flying a distance of 661.44 miles.

1926—The pilot of a JN training plane, which carried an attached and stored parachute, opened the chute at 2,500 feet over San Diego Naval Air Station; the chute landed the plane, although not without some damage.

1932—Amelia Earhart became the first woman to complete a nonstop transcontinental flight, Los Angeles to New York.

1947—A new world speed record of 650.92 mph was set by Maj. Marion E. Carl, USMC, in the Douglas D-588-I which had been flown by Comdr. Turner F. Caldwell in setting the previous record of 640.74 mph on August 20, 1947.

1953—The USAF announced that it had transformed its B-36 bomber into a "flying aircraft carrier" capable of launching and recovering jet fighters (the F-84 Thunderjet) in flight.

1953—An undisclosed number of USAF B-36 bombers landed in Japan after completing a pioneering nonstop mass flight from the United States.

August 26

1939—A B-17A, with Maj. Charles M. Cummings and Stanley Umstead as pilot

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and co-pilot respectively, flew 1,200 miles from Miami to the Panama Canal Zone in 6 hours. The flight indicated the speed with which reinforcements could be rushed to protect the Canal.

1943—London disclosed that the AAF was using new type perspective maps, with targets drawn as seen from the air, to improve its high altitude precision bombing.

1954—In a Bell X-1A rocket-propelled aircraft launched from a B-29 Superfortress over Edwards AFB, Calif., Maj. Arthur Murray, USAF, reached an altitude of 90,000 feet, the greatest height so far attained by man.

August 27

1923—(27-28 August) A new world refueled duration record of 37 hours 15 minutes 14.8 seconds, and a distance record of 3,293.26 miles was set by Lts. Lowell H. Smith and John P. Richter in a DH4B-Liberty 400 at Rockwell Field, San Diego.

1943—10 SB-24's ("Snoopers") equipped with special radar sighting devices, which made accurate bombing possible irrespective of visual sighting, began operations from Carney Field, Guadalcanal.

1945—B-29's completed their first supply dropping operation to Allied POW's with a mission to the Weihsien camp near Peiping, China.

August 28

1909—After instruction by Glenn Curtiss, Charles F. Willard, America's first exhibition pilot, gave his first exhibition at Scarsborough Beach, Toronto.

1918—John D. Ryan, the first Director of Air Service, was appointed to administer the Bureau of Aircraft Production and the Division of Military Aeronautics, and was made Assistant Secretary of War.

1919—(28 August-19 September) Lawson "air liner," 26-passenger twin Liberty

biplane, made a demonstration trip from Milwaukee to Washington via Chicago, New York, and other cities.

1948—The Navy transport *Caroline Mars* landed at Chicago after a nonstop flight from Honolulu in record time of 24 hours 9 minutes.

1953—At Santa Susana, Calif., a complete liquid-rocket engine assembly (Navaho) having a thrust in excess of 200,000 lbs. was fired for the first time.

August 29

1916—The first U. S. Coast Guard Aviation Division was authorized (but no appropriation was provided until 1926).

1938—Maj. Alexander de Seversky set east-west transcontinental speed record of 10 hours 2 minutes 55.7 seconds by a 2,457 mile flight.

1954—Flying a Sikorsky XH-39, Warrant Officer Billy I. Wester, USA, set a helicopter speed record of 156 mph over a 3-km. course at Windsor Lock, Conn.

August 30

1939—The Pan American Airways' *California Clipper* landed at Auckland, New Zealand, completing the first flight of fortnightly service from San Francisco.

1946—Paul Mantz, Burbank, Calif., won the Bendix Trophy air race averaging 435.-604 mph for the 2,048 miles from California to Cleveland in a P-51.

August 31

1910—Glenn Curtiss flew across Lake Erie between Euclid Beach and Cedar Point, 64.75 miles, in 1 hour 18 minutes to win \$5,000 prize of the *Cleveland Press*.

1925—(31 August-8 September) In Navy's attempted San Francisco-Honolulu flight, Comdr. John Rodgers and crew alighted short of their mark, but set a nonstop seaplane record of 1,841 miles.

1931—At the National Air Race meet, Cleveland, it was announced that Mrs. Phoebe Omlie won the women's division of the handicap transcontinental derby.

1932—Capt. A. W. Stevens and Lt. C. D. McAllister, Air Corps, flew five miles above earth's surface at Fryeburg, Maine, to photograph an eclipse of the sun.

1953—Flying a Douglas D-558-II Skyrocket research aircraft which had been launched from a B-29 Superfortress at an altitude of 34,000 feet, Lt. Col. Marion E. Carl, USMC, attained an altitude of 83,235 feet at Edwards AFB, Calif.

SEPTEMBER

September 1

1919—Dive bombing was demonstrated about this date at Aberdeen Proving Ground by Lt. Lester B. Sweely, Air Service Reserve, in a DH4B, dropping a 300-lb. demolition bomb, carried under the fuselage.

1927—Air express operations were begun by American Railway Express and major airlines.

1940—Pan American Airways inaugurated a new three-day route from the United States to Rio involving a 1,500-mile shortcut across Amazon jungles.

1942—First airborne engineering unit, the 871st Airborne Engineers, was activated at Westover Field, Mass.

1953—The USAF announced the first instance of aerial refueling of jet-powered aircraft by jet-powered aircraft in which a standard B-47 Stratojet received fuel in the air from a KB-47B.

1954—The Continental Air Defense Command—CONAD (a joint command composed of AF, Army, Navy, and Marine forces)—was established at Colorado Springs, Colo.

September 2

1910—The first American woman pilot, Blanche Scott, soloed over the Keuka Lake Front field of the Curtiss Company, Hammondsport, N. Y., but did not receive an FAI certificate.

1916—Plane-to-plane radio was demonstrated at North Island, San Diego, when radio-telegraph messages were sent and received a distance of about two miles between the plane of Lt. W. A. Robertson and A. D. Smith and the plane of Lt. H. A. Dargue and Capt. C. C. Culver.

1938—Merrill Phoenix and Howard Allen in a Piper Cub began a flight at Syracuse, N. Y. which set world light-plane endurance record of 106 hours.

1940—Agreement was made whereby the United States transferred 50 over-age destroyers to Great Britain in exchange for air and naval bases at 8 strategic points in the Atlantic and Caribbean areas.

1953—Capt. Harold E. Collins, USAF, set a speed record of 707.889 mph in an F-86D Sabrejet over a 15-km. straight course at Vandalia, Ohio.

1953—In an F-86D Sabrejet fighter Brig. Gen. Stanley Holtoner, USAF, set a world speed record of 690.118 mph over a 100-km. closed course at Vandalia, Ohio.

1953—In a Piasecki YH-21 Workhorse at Dayton, Ohio, Capt. Russell M. Dobyns, USAF, set an altitude record of 22,289 feet for helicopters.

1956—At the National Aircraft Show, Oklahoma City an H-13, USA helicopter, set an endurance record in the air of 57 hours 40 minutes.

September 3

1908—The first test flight of an Army flying machine was made at Fort Myer, Va., by Orville Wright.

1917—Brig. Gen. William L. Kenly, Field Artillery, became the first Chief of Air Service, AEF, providing a single head for all activities.

1925—The Navy dirigible *Shenandoah* collapsed in a storm over Ava, Ohio, killing 14 of the 43 persons on board.

1932—Maj. James H. Doolittle set a new world speed record for land planes by

Sept. 4-7

averaging 294 mph over 3-km. course at Cleveland, Ohio, in Granville Gee Bee monoplane with Wasp engine.

1945—An Air Transport Command C-54 Skymaster, commanded by Maj. G. E. Cain, and carrying films of the formal Japanese surrender, set a new flight record of 31 hours 25 minutes between Tokyo and Washington.

1954—In flying a F-86 Sabrejet 649.302 mph at Dayton, Ohio, Maj. J. L. Armstrong, USAF, broke the speed record for a 500-km. closed course.

September 4

1911—Lt. T. D. Milling became the first Army officer to fly at night when he landed his plane by the light of gasoline flares at the Boston meet after participation in the 160-mile tri-state air race, won by Earle L. Ovington.

1922—The first transcontinental crossing within a single day was made by Lt. J. H. Doolittle in a rebuilt DH4B-Liberty 400, from Pablo Beach, Fla., to Rockwell Field, San Diego, Calif., a distance of 2,163 miles in 21 hours 20 minutes flying time.

1936—Louise Thaden and Blanche Noyes won the Bendix Trophy Race and set a women's east-west transcontinental speed record, flying from Floyd Bennett Field, N. Y., to Los Angeles in 14 hours 55 minutes 1 second, in a Beechcraft with Wright Whirlwind engine.

September 5

1918—W. C. Potter was appointed Director of Aircraft Production, succeeding John D. Ryan.

1923—Condemned naval vessels *New Jersey* and *Virginia* were destroyed by bombing during Army bombing tests off Cape Hatteras, N. C.

1941—Mass transpacific flight of heavy bombers was begun by nine B-17D Flying Fortresses, which left Hawaii for the Philippines, flying by way of Midway, Wake, Port Moresby, and Darwin,

Australia. They landed at Clark Field, near Manila, on 12 September.

1951—USAF announced it had awarded a contract to Consolidated Vultee to build world's first atomic-powered plane. The engine was to be built by General Electric.

1953—In a Piasecki YH-21 Workhorse at Dayton, Ohio, Capt. Russell M. Dobyns, USAF, set a 3-km. speed record of 146,735 mph for helicopters.

September 6

1916—First drop of fragmentation bombs by U. S. Army. The bombs, known as the Barlow "Return Action," were tested at the Signal Corps Aviation Station, Mineola, Long Island.

1919—New unofficial world altitude 2-man record of 28,250 feet was set by Maj. R. W. Schroeder and Lt. G. A. Elfrey in a Lepere Liberty 400 at Dayton, Ohio.

1942—VIII Bomber Command lost its first aircraft in combat when two B-17's failed to return from a strike on the Avions Potez aircraft plant at Meaulte, France.

September 7

1911—Lt. T. G. Ellyson, USN, demonstrated shipboard wire launching of the Navy's Curtiss seaplane, taking the plane off a wire cable stretched from a platform on shore, representing a ship's deck, and alighting on the water at Lake Keuka, Hammondsport, N. Y.

1918—First United States demonstration of troop transport by air when several planes carried 18 enlisted men from Chanute Field to Champaign, Ill.

1938—17 U. S. Navy planes completed a mass flight from San Diego to Hawaii, 2,570 miles, in 17 hours 21 minutes.

1956—Capt. Iven C. Kincheloe set an altitude record for manned flight when at Edwards AFB, Calif., he piloted a Bell X-2 rocket-powered aircraft to a height of 126,200 feet.

September 8

1920—A transcontinental mail route, combination plane-train, from New York to Chicago to San Francisco was completed.

1947—Announcement was made that German V-2 rocket was successfully fired on 6 September from U. S. aircraft carrier *Midway* in Atlantic tests.

September 9

1908—Orville Wright broke all duration records when he flew for 57 minutes 25 seconds, making 57 circuits of the field at Fort Myer, Va., at over 100 feet altitude.

1908—Lt. F. P. Lahm became the first Army passenger carried in the "Wright Flyer," during trials at Fort Myer, Va.

September 10

1927—Gordon Bennett international balloon race, Dearborn, Mich., was won by E. J. Hill and A. G. Schlosser, 745 miles.

1936—Regular transatlantic flying boat service was launched by Deutsche Lufthansa from Horta, Azores, to Bermuda; in October the service was extended to New York.

1944—The first airplane designed in World War II exclusively to carry cargo, the C-82, was successfully test-flown at the Fairchild aircraft plant, Hagerstown, Md.

September 11

1920—Three airships flew formation under radio direction at Langley Field, Va.

1941—Glenn L. Martin Company displayed at Baltimore a 70-ton four-engine Navy flying boat with a 200-foot wing spread—said to be the largest in the world.

September 12

1918—(12-15 September) The greatest air armada to date, when 1,481 planes un-

der General William Mitchell participated in the St. Mihiel offensive.

1918—Lt. Frank Luke, 27th Aero Squadron, shot down his first balloon. When he was killed 17 days later (29 Sep) he had shot down 18 balloons and airplanes. For his exploits he was posthumously awarded the Congressional Medal of Honor, the first aviator to receive the medal.

1925—The Morrow Board was appointed by President Coolidge to determine United States air policy.

1942—In the first demonstration of the paraf rag bomb in World War II, the 89th Attack Squadron bombed Buna airstrip, New Guinea.

September 13

1916—A Field Officers' Course in Aeronautics was established at the Signal Corps Aviation School, San Diego.

1923—(13 September-14 December) A round trip transcontinental tour, anticipating national airways, was made by Lts. J. F. Whitley and H. D. Smith and crew in a Martin-2 Liberty 400, from Langley Field, Va., to San Diego and return, a distance of 8,000 miles.

1935—Howard Hughes, flying a Hughes Special at Santa Ana, Calif., set a new international speed record of 352 mph for land planes.

1943—Over 1,200 paratroopers of the 82d Airborne Division were dropped on the Salerno, Italy, beachhead by the 52d Troop Carrier Wing without the loss of a man or a plane.

1951—USAF announced establishment of its first pilotless bomber squadron at the Missile Test Center, Cocoa, Fla., to be formed 1 October 1951.

September 14

1922—First transcontinental airship flight was begun by the non-rigid C2, Langley Field, Va., to Ross Field, Arcadia, Calif., with Maj. H. A. Strauss commanding; the trip was completed 23 September.

Sept. 15-19

1936—Harry Richman and Henry T. (Dick) Merrill began the return flight of their transatlantic round trip flight between New York and London.

1944—Successful flight into a hurricane for scientific data was made by Col. Floyd B. Wood, Maj. Harry Wexler, and Lt. Frank Reckord in Douglas A-20.

September 15

1925—RS-1, the first great semi-rigid helium airship constructed in America, was completed at Scott Field, Ill.

1938—Announcement was made of award of the Collier Trophy to the Army Air Corps for development of pressurized cabin substratosphere plane.

1938—A space cabin simulator developed at the School of Aviation Medicine under Dr. Strughold was the forerunner of the enclosed environment of the space ship.

1942—The first American infantrymen to reach New Guinea (126th Inf. Regiment) landed at Seven-mile airdrome by transport planes.

1948—A world speed record of 671 mph (exclusive of air-launched planes) was set by Maj. Richard L. Johnson, USAF, in F-86A at Muroc, Calif.

1954—A 4-engine MATS plane set a transatlantic speed record for propeller driven aircraft in flying from Westover AFB, Mass., to Germany in 11 hours 48 minutes, at an average speed of 341 mph.

September 16

1914—Non-recoil 6-pounder Davis airplane gun was shown at the New London Ship and Engine Co., Groton, Conn.

1919—Four JN4D's from Corpus Christi provided relief to seven persons isolated in the area by storm and flood.

September 17

1908—Lt. T. E. Selfridge, the first Army officer to be killed in an airplane flight,

met his death during a trial flight of the Wright flying machine at Fort Myer, Va.

1911—Calbraith P. Rodgers in a Burgess-Wright biplane began the first transcontinental flight, New York to Pasadena. The trip, 3,390 miles, required 49 days, and was completed on 5 November.

1941—Parachute troops were used for the first time in an American tactical exercise when paratroopers were dropped during Louisiana maneuvers.

1944—Operation MARKET began when 1,546 Allied aircraft and 478 gliders carried parachute and glider troops in an airborne assault between Eindhoven and Arnhem in Holland with object of securing the Rhine crossing at Arnhem.

September 18

1919—Roland Rohlfs set a world altitude record of 32,450 feet in a Curtiss triplane K 12 Curtiss 400 at Garden City, N. Y.

1947—W. Stuart Symington was sworn in as the first Secretary of the Air Force; first Air Force Day. Effective date of transfer of air activities from Army to new Department of the Air Force.

1952—The United States and Denmark revealed that a huge strategic air base was being built at Thule, in northwestern Greenland, 930 miles from the North Pole.

September 19

1928—The first diesel engine to power heavier-than-air craft, designed by I. M. Woolson and manufactured by Packard Motor Car Company, was flight tested at Utica, Mich.

1937—Roscoe Turner, flying a Laird-Turner "Racer, set a United States speed record of 289.908 mph for 100 kilometers at Detroit, Mich.

September 20

- 1950—The USAF announced that planes would be tested by remote control, with pilots viewing instrument panels from the ground by television.
- 1951—The Air Force made its first successful recovery of animals from a rocket flight when a monkey and 11 mice survived an Aerobee flight to an altitude of 236,000 feet.
- 1956—The first Jupiter C (a three stage missile) was launched at Cape Canaveral, Fla. It attained an altitude of 680 miles and traveled 3,300 miles.
- 1957—The USAF Chief of Staff, General Thomas D. White, announced the development of radar units capable of detecting ICBM's at a distance of 3,000 miles.

September 21

- 1916—The National Research Council, formed at the request of President Wilson by the National Academy of Science, held its first meeting in New York.
- 1932—The intensity of cosmic rays at various altitudes was tested by personnel of 11th Bombardment Squadron in a Condor Bomber in flights from March Field, Calif.
- 1938—Maj. Gen. Oscar Westover, Chief of the Army Air Corps, was killed in an airplane crash at Lockheed Airport, Burbank, Calif.

September 22

- 1938—Maj. Gen. H. H. Arnold was appointed Chief of Air Corps.
- 1947—Air Force C-54 completed the first transatlantic robot-controlled flight, from Stephenville, Newfoundland, to London, a distance of 2,400 miles.
- 1950—First nonstop flights of Atlantic by jet aircraft were completed when Col. David C. Schilling landed at Limestone, Maine, after flying 3,300 miles from England in 10 hours 1 minute; Lt. Col. William D. Ritchie bailed out over Labrador. Both planes refueled in the air.

September 23

- 1911—Earle L. Ovington, flying a Queen monoplane, became America's first air-mail carrier to cover a set route from an established post office (Nassau Blvd., N. Y., to Mineola, N. Y.), for which he was appointed Air Mail Pilot No. 1 by the Postmaster General.
- 1921—Day and night bombardment test flights were begun; they resulted in the sinking of the battleship *Alabama* in the Chesapeake Bay by a 2,000-lb. bomb.
- 1942—Brig. Gen. James H. Doolittle assumed command of the Twelfth Air Force.
- 1952—A USN radar defense picket ship began around-the-clock operations off the U. S. east coast as a part of the U. S. air defense system.

September 24

- 1919—Maj. R. W. Schroeder, flying a Lepere at McCook Field, Ohio, set an altitude record of 30,900 feet for a plane carrying a passenger.
- 1929—Lt. James H. Doolittle made the first all-blind flight at Mitchell Field, Long Island. With completely covered cockpit (but accompanied by a check pilot) he took off, flew a short distance, and landed.
- 1951—McDonnell Aircraft Corporation won Navy's "flying crane" helicopter competition with a design using a single three-bladed rotor system, powered by small jet engines on the blade tips.

September 25

- 1918—1st Lt. Edward V. Rickenbacker, 94th Aero Squadron, attacked seven enemy planes near Billy, France. For this exploit, he was later awarded the Congressional Medal of Honor.
- 1920—National Balloon Race, Birmingham, Ala., was won by H. E. Honeywell, landing at Chatham, Ontario, a distance of 1,126.543 kilometers.
- 1947—President Truman appointed Gen.

Sept. 26-30

Carl Spaatz as United States Air Force Chief of Staff.

September 26

1911—An official 3-man world flight endurance record of 1 hour 54 minutes 42 seconds was set by Lt. T. D. Milling in a Wright airplane at Nassau Boulevard, Long Island, winning the Rodman Wanamaker Trophy.

1931—The keel of the *Ranger*—first aircraft carrier designed and built as such—was laid at Newport News, Va.

1945—The Navy, at Naval Air Station, Anacostia, D. C., demonstrated the Ryan Fireball FR-1, the first partially jet-powered airplane designed for aircraft carriers.

1945—In a series of firing tests at White Sands Proving Ground, N. Mex., between September 26 and October 25, a WAC-Corporal attained a height of 43.5 miles.

1947—Transfer of personnel, bases, and materiel from the Army to the new Department of the Air Force was ordered by Defense Secretary James W. Forrestal.

1947—Maj. Gen. William E. Kepner, USAF, was named chief of the new atomic energy division of the USAF.

September 27

1922—The first "radar observations" were made by Dr. Albert Hoyt Taylor and Leo C. Young of the Naval Aircraft Radio Laboratory, Anacostia, D. C.

1938—The first airplane instructor's license issued by the Civil Aeronautics Authority was issued to Arthur J. Banks, Atlanta, Ga.

1943—In attacks by U. S. B-17's on targets at Emden, approximately 1,000 tons of bombs were dropped in the heaviest assault on a single target to date. Escorting P-47 fighters set a distance record by flying more than 600 miles on the mission.

1956—After having been launched from a

B-50 bomber over the Mojave Desert in California, Capt. Milburn G. Apt, flying a X-2 rocket-powered plane, set a speed record of 2,178 mph. Before the flight ended the aircraft crashed and the pilot was killed.

September 28

1912—Cpl. Frank S. Scott, first enlisted fatality in Signal Corps aviation, was killed in the crash of an airplane in which he was passenger with Lt. L. C. Rockwell (also killed) at College Park, Md.

1918—A JN4 maneuvered another JN4 solely by radio at Langley Field, Va.

1921—Lt. John A. Macready, Air Service, set a world altitude record for airplanes by flight to 34,509.5 feet in Lepere biplane over Dayton, Ohio.

1948—An Army Signal Corps balloon, released at Belmar, N. J., set a 140,000 foot altitude record.

1948—NACA announced that a ramjet missile had exceeded 1,600 mph.

1950—In a balloon launched at Holloman AFB, eight white mice survived a flight to an altitude of 97,000 feet.

September 29

1941—First class began training in heavy bombardment crew school.

1942—Eagle squadrons, composed of American flyers serving with the RAF, were formally taken over by the VIII Fighter Command and organized into the 4th Fighter Group.

1950—USAF announced a new record for parachute jump, 42,449 feet, set by Capt. Richard V. Wheeler at Holloman AFB, N. Mex.

September 30

1906—The first Gordon Bennett balloon race was won by Lt. F. P. Lahm and Maj. H. B. Hersey. Taking off from Paris, France, they landed at Scarborough, England, a flight of 647.98 kilometers.

1911—Lt. H. H. Arnold was "stunt man," for the leading actor in the pioneer air movie "The Military Air Scout." It was photographed at Nassau Boulevard, N. Y., after an air meet held there by the Aero Club of America.

1949—The Berlin Airlift, gradually reduced since 12 May 1949, officially ended; 2,343,301.5 tons of supplies were carried on 277,264 flights, of which United States planes carried 1,783,826 tons.

1952—A Bell Rascal XGAM-63 air-to-surface strategic missile was launched for the first time.

OCTOBER

October 1

1907—The Aerial Experiment Association was formed at Beinn Breagh, near Baddeck, Nova Scotia, the summer home of Dr. Alexander Graham Bell, at the suggestion of Mrs. Bell. The members were Dr. Bell, F. W. Baldwin, J. A. D. McCurdy, Glenn H. Curtiss, and Lt. Thomas E. Selfridge.

1946—The Navy plane *Truculent Turtle* set a record for nonstop long distance flight, completing an 11,236-mile trip from Perth, Australia, to Columbus, Ohio, in 55 hours 15 minutes.

1947—The prototype F-86 Sabrejet flew for the first time.

1957—USAF military personnel for the first time launched an intercontinental missile, the XSM-62 Snark, in a flight from Cape Canaveral, Fla.

October 2

1912—George A. Gray, flying a Burgess-Wright plane, began the first flight over the Adirondacks from Malone to Saranac Lake, N. Y., a distance of about 85 miles.

1942—The first flight by turbojet aircraft in the United States was made at Muroc, Calif., by Bell P-59A with General Electric I-A engine.

1956—A full-scale flight-test version of a

large guided missile, XSM62 (N69D series) Snark, was successfully recovered for the first time after a flight from Cape Canaveral.

October 3

1918—Flight refueling was demonstrated by Lt. Godfrey L. Cabot, USNR, who lifted 155 pounds of weights into his Burgess-Dunne seaplane from a moving sea sled. In a second flight exactly two years later Cabot picked up a 5-gallon can of gasoline from a float in the Potomac River near Washington, D. C.

1931—Clyde Pangborn and Hugh Herndon, Jr., began the first nonstop flight between Japan and the United States. Flying a Bellanca-PW 420, they landed at Wenatchee, Wash., on 5 October.

1953—Lt. Comdr. James Verdin, USN, flying a Douglas XF-4D Skyray fighter, set a world speed record of 752.944 mph in four runs over a 3-km. course at Salton Sea, Calif.

October 4

1909—Wilbur Wright flew from Governors Island (off the southern end of Manhattan Island) out past the Statue of Liberty, up the Hudson to a turn opposite Grant's Tomb, and back to Governors Island at New York's Hudson-Fulton celebration.

1945—The first Skymaster round-the-world flight was completed by the Army Air Transport Command when a Douglas C-54 landed in Washington. The flight covered 23,279 miles in 149 hours 44 minutes, including ground time of 33 hours 21 minutes.

1949—The entire field artillery battery was dropped from C-82 by parachute at Fort Bragg, N. C.

October 5

1905—Orville Wright Flew 24.2 miles in 38 minutes 3 seconds at Dayton, Ohio, establishing a world distance and duration record.

Oct. 6-10

1921—Maj. Gen. Mason M. Patrick became Chief of Air Service.

1922—Lts. J. A. Macready and O. G. Kelly, in a Fokker Transport T2-Liberty 375, set an endurance record of 35 hours 18 minutes 30 seconds, at Rockwell Field, San Diego.

October 6

1913—Capt. C. deF. Chandler and Lt. T. D. Milling, who with Lt. H. H. Arnold had qualified as Military Aviators on 5 July 1912, were awarded their badges; the only two struck off at that time.

1923—Lt. A. J. Williams, USN, flying a Curtiss Racer at St. Louis, Mo., set new world speed records of 243.8 mph for 100 kilometers, and 243.7 mph for 200 kilometers over a closed circuit.

1945—Norway and the United States agreed on a reciprocal civil air transport pact giving each nation the right of transit and nontraffic stop along standard lines in each country.

1955—The DOD announced that it had awarded a contract to the Glenn L. Martin Co., as primary contractor, for the building of a rocket vehicle for the launching of an earth satellite. Martin was authorized to contract with the General Electric Co. for construction of a rocket motor for the launching vehicle.

October 7

1909—Glenn H. Curtiss became the first American to hold an FAI airplane certificate; he was given Aero Club of France certificate No. 2.

1916—The National Balloon Race, Muskogee, Okla., was won by H. E. Honeywell, landing at Cascade, Iowa, a distance of 836.86 kilometers.

October 8

1912—The first Navy physical examination for pilots was published by the Bureau of Medicine and Surgery.

1914—A 16,798-foot official American one-

man altitude record was set by Capt. H. LeR. Muller in a Curtiss 90 at San Diego.

1919—Start of Army transcontinental reliability and endurance test, New York-San Francisco and return. Forty-four planes completed the westbound trip, 15 the eastbound, and 10 made the round trip. On basis of elapsed time Lt. B. W. Maynard in a DH4 won the east-west and round trip; Maj. Carl Spaatz in a DH4B won the west-east trip.

1956—The Military Air Transport Service, Department of Defense, announced that since 1948 it had made over 100,000 ocean crossings, carrying more than 400,000 passengers and 700,000 tons of mail and freight.

October 9

1912—The first completion for the Mackay Trophy was won by Lt. H. H. Arnold, the only contestant.

1918—The highest concentration of air forces to date—more than 250 bombers and 100 pursuit planes—dropped 32 tons of bombs in cantonment district between La Waville and Damvillers.

1934—The Gold Medal of the Federation Aeronautique Internationale was presented to Wiley Post.

1943—British Air Chief Marshal Portal declared that the bombing of the Folke-Wulf plant at Marienburg by U. S. B-17's was "the most perfect example of accurate distribution of bombs."

October 10

1911—The Riley E. Scott bombsight and dropping device was tested at College Park, Md., from a Wright airplane flown by Lt. T. D. Milling, in first military trials.

1923—The first American-built rigid dirigible, and first of the Zeppelin type to use helium gas was christened the *Shenandoah*.

1923—Capt. St. Clair Streett, pilot, and Capt. A. W. Stevens, observer and pho-

tographer, set a world altitude record of 37,854 feet for planes carrying more than one person in a flight from Wright Field, Dayton, Ohio.

1947—The United States Patent Office issued a patent on the Norden bombsight, which Carl L. Norden had applied for 17 years earlier.

1950—Lt. Gen. Lauris Norstad was appointed commander of United States Air Forces in Europe.

1956—NACA revealed that a 4-stage rocket-propelled research missile had attained speeds of Mach 10.4 (the equivalent of 6,864 mph at high altitudes).

October 11

1910—Former President Theodore Roosevelt became the first President to fly. He was a passenger in a flight at St. Louis.

1949—Pilots Bob Woodhouse, and Woody Jongeward set a new endurance record of 1,124 hours 14 minutes in an Aeronca at Yuma, Ariz.

1957—A Thor missile launched at Cape Canaveral, Fla., the second successfully tested, exceeding its designed 1,500-mile range and landed in the Atlantic Ocean some 2,000 miles from the point of launching.

October 12

1916—Antony Jannus was killed in Russia while demonstrating a Curtiss flying boat.

1918—The first night air pursuit operations by American pilots were flown by members of the 185th Squadron in France.

1925—Lt. Cyrus Bettis, Air Service, flying a Curtiss R3 C-1, Curtiss V, at Mitchel Field, N. Y., set new world speed records of 249.3 mph for 100 kilometers, and 249 mph for 200 kilometers over a closed circuit.

1927—Wright Field, Dayton, Ohio, was formally dedicated.

1939—Harry B. Chapman, in an Aeronca seaplane, established a world distance

record for light seaplanes in a 1,163.8-mile nonstop flight from Jamaica Bay, N. Y., to New Orleans.

October 13

1915—The Wright Company was purchased from Orville Wright by a syndicate headed by William B. Thompson, Harry Payne Whitney, and T. Frank Manville.

1922—The Liberty Engine Builders' Trophy Race was won by Lt. T. J. Koenig in a Lepere-Liberty 400 with a speed of 128.8 miles per hour over a 257.7-mile course at National Airplane Races, Selfridge Field, Mich.

1939—Evelyn Pinckert Kilgore, San Bernardino, Calif., became the first woman to receive an airplane instructor's license under the CAA.

October 14

1913—A patent for the automatic stabilizer was issued to Orville and Wilbur Wright.

1947—The first faster-than-sound flight was made by Capt. Charles E. Yeager at Muroc, Calif., in a rocket-powered Air Force research plane, Bell XS-1.

1952—75 U. S. F-84's of the 27th Fighter Escort Wing completed the longest known overwater flight by single-engined jet fighters, from Midway to Japan. The first flight, led by Col. Donald J. M. Blakeslee, refueled in the air and covered 2,575 miles.

1953—The X-10 prototype of the North American B-64 Navaho, a ram-jet propelled surface-to-surface guided missile, made its initial flight.

October 15

1918—Gen. William Mitchell was designated Chief of Air Service Army Group. This designation was disapproved by the General Staff and abolished.

1924—ZR-3 (later renamed the *Los Angeles*), the first dirigible sent to the U. S. Navy from Germany under reparations agreement, arrived at Lakehurst, N. J.

Oct. 16-20

October 16

1917—Final tests of Army's airplane radio telephone at Langley Field, Va., achieved records of 25 miles for plane-plane communication and 45 miles airplane-ground.

1943—The Remington Arms Company announced new-type incendiary ammunition to pierce self-sealing fuel tanks and cause explosions.

1943—The Ninth Air Force was reorganized in England as the tactical arm of the U. S. Army Air Forces in the European Theater of Operations; Maj. Gen. L. H. Brereton assumed command.

1953—Test pilot Robert O. Rahn, flying a XF-40 Skyray fighter at Edwards AFB, Calif., established a world speed record of 728.11 mph over a 100 km closed course.

1955—Setting unofficial transcontinental speed records for transport aircraft, the prototype Boeing 707 crossed the United States twice in one day, averaging 592 mph on a flight from Seattle, Wash., to Washington, D. C., and 567 mph on the return trip.

1957—The USAF successfully launched artificial meteors that traveled at a speed faster than 33,000 mph. (i.e., some 8,000 mph faster than the velocity necessary to escape from the earth). (Carried by an Aerobee rocket to a height of 35 miles, the nose section then ascended to a height of 54 miles where shaped charges blasted the pellets into space.)

October 17

1907—(17-18 October) Capt. Charles deF. Chandler and J. C. McCoy in the Signal Corps Balloon No. 10 became the first winners of the Lahm Cup. Their flight from St. Louis, Mo., to Walton, W. Va., a distance of 473.56 miles was made in 20 hours 15 minutes.

1949—Boeing Airplane Co. delivered the first C97A to Military Air Transport Service.

1954—Piloting a Sikorsky XH-39 at Bridge-

port, Conn., Warrant Officer Billy I. Wester, USA, established a world helicopter altitude record of 24,500 feet.

1955—At Edwards AFB, Calif., Lt. Gordon Gray, USN, flying a Douglas A-4-D Skyhawk established a world speed record of 695.163 mph for a 500 km closed-circuit course.

October 18

1917—McCook Field, Dayton, Ohio, established as Signal Corps experimental laboratory.

1917—The Aviation Medical Research Board was established by the Signal Corps.

1922—A world speed record of 222.96 mph for 1 kilometer was set by Brig. Gen. William Mitchell in a Curtiss R6-D12 Curtiss 375, at Mt. Clemens, Mich.

October 19

1928—In a demonstration by paratroopers a 6-man machine-gun team parachuted from a 6-airplane formation over Brooks Field, Tex.

1935—The Mitchell Trophy Race was won by Capt. Karl E. Gimmmler, U. S. Air Corps, who flew 212.96 mph at Selfridge Field, Mich.

1948—The Navy announced that photographs of the earth's surface had been taken from altitudes between 60 and 70 miles by cameras installed in rockets.

1955—The Federal Communication Commission authorized the American Telephone and Telegraph Co. to start work on the SAGE radar warning network.

October 20

1911—The original Army Wright plane was delivered to the Smithsonian Institution.

1945—Three B-29's, commanded by Lt. Gen. N. F. Twining, landed in Washington after blazing a new airmail trail from Guam via India and Germany. Flying time was 59 hours 30 minutes for the 13,167 miles.

October 21

1929—Air Ambulance Service was organized by Colonial Flying Service and Scully Walton Ambulance Company, New York, N. Y.

1936—Pan American Airways initiated regular weekly six-day passenger service between San Francisco and Manila.

1942—B-24's of the India Air Task Force bombed mines near Kuyeh in first offensive mission of the AAF north of the Yellow River.

1942—The VIII Bomber Command flew its first mission against the German submarine bases with 66 B-17's and 24 B-24's attacking Lorient-Keroman, dropping 30 tons of bombs.

October 22

1910—Beginning of Belmont Park International, the largest aerial meet held in America prior to World War I.

1943—Maj. R. C. Heffner received the DFC for pioneer flights establishing air routes across Africa and the Middle East.

1955—The Republic F-105A, a fighter bomber designed to carry nuclear weapons and support field armies, exceeded the speed of sound on its initial flight which was made at Edwards AFB, Calif.

1957—The Army's Jupiter (IRBM) missile was successfully fired at Cape Canaveral.

1957—The 4th stage of a rocket fired from a balloon at 100,000 feet above Eniwetok, in Operation Far Side, penetrated at least 2,700 miles into outer space.

October 23

1909—Lt. B. D. Foulois took his first flying lesson from Wilbur Wright at College Park, Md.

1922—American Propeller Company demonstrated the reversible propeller at Bolling Field, D. C.

1957—A USAF Bomarc missile, in 2 min-

utes from beginning of alert, successfully intercepted and knocked down a B-17 drone at a distance of 100 miles over the Atlantic Ocean.

October 24

1941—Arthur J. Starnes, near Chicago, set a new record for free fall by dropping from 30,800 feet to 1,500 feet in 116 seconds before opening his parachute.

1945—An American Airlines' plane arrived at Hurn Airfield, England, from New York City in 14 hours 5 minutes flying time, to complete the first land-plane commercial flight from North America to Europe.

October 25

1911—Lts. T. G. Ellyson and J. H. Towers, USN, established an unofficial nonstop seaplane record of 138.2 miles from Annapolis, Md., to Buckroe Beach, Va., in 2 hours 27 minutes.

1923—Barling bomber (a 6-engine, triplane), flown by Lt. H. R. Harris and crew, set several weight-carrying records: greatest weight, 3,000 kilograms; duration and altitude records of 1 hour 19 minutes 11.8 seconds and 5,344 feet.

1930—The first transcontinental through air service opened simultaneously from New York City and Los Angeles by Transcontinental and Western Air, Inc.

1942—American bombers raided Japanese-occupied Hong Kong and damaged the Kowloon docks in the first raid on the former Dutch crown colony since Japanese occupation.

1950—Announcement was made of the appointment of Mr. Kaufman T. Keller, president of the Chrysler Corporation, to the newly-created position of Director of Guided Missiles for the U. S. Armed Forces.

October 26

1909—Lt. F. E. Humphreys became the first Army officer to solo in the Army's first airplane (College Park, Md.).

1945—Curtiss Wright Research Laboratory announced that special supersonic flying devices, built for the Government, had attained speeds of 1,400 miles an hour. The devices did not depend on propellers or atomic energy for power.

1949—Pan American Boeing Stratocruiser claimed a commercial speed record of 9 hours 41 minutes for flight from New York to London.

October 27

1909—The first woman airplane passenger in the U. S.—Mrs. Ralph H. Van Deman—made a four-minute flight at College Park, Md., with Wilbur Wright at the controls.

1944—The first American air unit to be based in the Philippine Islands since 1942, the 9th Fighter Squadron, flew its first mission from Tacloban airstrip.

October 28

1907—The International Aeronautical Congress was held at the Automobile Club, New York.

1924—Army airplanes broke up cloud formations at 13,000 feet over Bolling Field, D. C., by blasting them with electrified sand.

1927—The first air-passenger international station was established at Meacham Field, Key West; the first flight from the station was made by Pan-American World Airways to Havana, Cuba.

October 29

1938—First paying woman Zeppelin passenger, Mrs. Clara Adams of Tannersville, Pa., left Lakehurst, N. J., in *Graf Zeppelin* on eastward return flight to Germany.

1936—Capt. James A. Mollison, British pilot, took off in a Bellanca Flash from Newfoundland, and landed at London 30 October—a distance of 2,300 miles, in 13 hours 17 minutes.

1953—Flying a F-100 Super Sabre at Ed-

wards AFB, Calif., Lt. Col. Frank K. Everest, USAF, set a speed record of 755.149 mph over a 15 km course.

October 30

1919—The reversible pitch propeller was tested at McCook Field, Dayton, Ohio.

1941—Maj. Alva L. Harvey completed a record-making flight around the world in a B-24. The trip included a 3,150-mile nonstop flight from Great Britain to Moscow on which personnel of the Harriman Mission were carried. The distance covered was 24,700 miles in 17 days elapsed time.

October 31

1910—Ralph Johnstone, in his Wright machine, set a new world altitude record of 9,714 feet at the Belmont Park International Meet.

1943—Thirty-eight B-17's bombed France for the first time from the Mediterranean Theater, striking Antheor Viaduct near Cannes.

1948—The Air Force revealed the use of ram-jet engines for first time on piloted aircraft, a modified F-80.

1957—A Snark ICBM launched at Cape Canaveral, Fla., flew 5,000 miles to the target area near Ascension Island.

NOVEMBER

November 1

1920—U. S. international passenger service was started by Aeromarine West Indies Airways between Key West, Fla., and Havana, Cuba.

1940—The Hawaiian Air Force was activated at Fort Shafter, T. H.

1944—An F-13 became the first United States plane to fly over Tokyo since April 1942.

1954—The last USAF B-29 Superfortress, the type of aircraft famed for having dropped atom bombs on Hiroshima and Nagasaki, Japan in August 1945, was withdrawn from service.

November 2

- 1916—Chicago-New York commercial night airmail line was requested by Blenn Muffly. Sponsored by the New York *Times*, Victor Carlstrom flew a mail demonstration over the route on November 2-3.
- 1936—John H. Shobe set a new speed record from New York to Boston, flying a Beechcraft 190 miles, in 50 minutes 30 seconds at an average speed of 227.5 mph.
- 1943—74 B-17's and 38 B-24's, in the first mission of the newly formed Fifteenth Air Force, dropped 327 tons of bombs on aircraft factories at Wiener Neustadt, flying 1,600 miles round trip.
- 1954—At San Diego, Calif., test pilot J. F. Coleman, flying the Convair XYF-1, took off in vertical flight, then shifted to horizontal, and finally changed back to vertical for landing.

November 3

- 1908—The Aeronautic Society held its first exhibition and tournament at its airfield at Morris Park race track, Bronx, N. Y.
- 1909—Lt. George C. Sweet, USN, was taken as a passenger in the first Army Wright airplane, thus becoming the first Navy officer to fly in an airplane.

November 4

- 1909—The first sportsman airplane owner in the United States, A. P. Warner of Warner Instrument Company, began instructing himself to fly a Curtiss airplane.
- 1911—The first flight of the new transatlantic airship *Akron*, designed by Melvin Vanniman, took place at Atlantic City, N. J.
- 1936—The Hawaiian *Clipper* arrived at Alameda, Calif., completing the first regular passenger flight to Manila and return.

November 5

- 1908—At a banquet in his honor in France,

Wilbur Wright was presented with the Grand Gold Medal of the Aero Club of France, a medal from the Academy of Sports, and 5,000 francs which he had won on 30 September 1908 in an air show.

- 1912—The first artillery adjustments from a plane in the United States were begun at Fort Riley, Kans., by Lts. H. H. Arnold, pilot, and Follett Bradley, observer.
- 1921—Bert Acosta in a Curtiss Navy C12, Curtiss 400, won the Pulitzer Race at 176.7 mph at the Omaha, Nebr., air meet.

November 6

- 1909—Wilbur and Orville Wright received the Legion of Honor Cross from the French Government at its consulate in New York.
- 1913—Experimental radio and fire control flights were begun at Fort Mills, Philippines, in cooperation with coastal defenses.
- 1915—The first airplane catapult launching from a moving vessel, was made by Comdr. Henry C. Mustin, USN, from the USS *North Carolina*, Pensacola Bay, Fla.
- 1944—Allied Supreme Headquarters in France announced formation of the First Tactical Air Force (Prov.), composed of American and French aircraft.
- 1945—The first jet propelled landing on an aircraft carrier was made by Ensign Jake C. West, USN, in an FR-1 Navy turbo-jet and conventional reciprocating engine fighter, using jet power to land on the carrier *Wake Island*.

November 7

- 1907—The Board of Ordnance and Fortification allotted \$25,000 to the Signal Corps for the procurement of an airship.
- 1939—The Mackay Trophy for 1938 was awarded to 2d Bombardment Group for 10,000-mile flight from Miami to Buenos

Aires, Argentina, and return to Langley Field, Va.

1941—First flight of the GB-1 guided glide bomb, containing preset guidance.

1945—Bell Aircraft Corporation announced successful test flights of a jet-propelled P-59 by remote control; television was used to read the instruments.

1957—President Eisenhower announced that the U. S. had solved the missile re-entry problem and showed the TV audience a nose cone recovered from a Jupiter missile fired in August 1957 at Cape Canaveral, Fla.

November 8

1922—The airfield at Montgomery, Ala., was named Maxwell Field.

1922—The School for Flight Surgeons was renamed the School of Aviation Medicine.

1934—Capt. E. V. Rickenbacker, Silas Morehouse, and Capt. Charles W. France flew from Los Angeles to Newark, N. J., in 12 hours 3 minutes 50 seconds, setting a new record for passenger transport.

1950—First jet-plane aerial combat in history, between a USAF F-80 and a MIG-15, took place in Korea. USAF Lt. Russell J. Brown shot down the MIG.

1956—Lt. Comdr. M. L. Lewis, USN, and Malcolm D. Ross established a world altitude record for manned balloons by ascending to a height of 76,000 feet, taking off near Rapid City, N. D., and landing 175 miles away near Kennedy, Neb.

November 9

1918—The 155th Night Bombardment Squadron was the last American squadron assigned to the Armies before the close of hostilities.

1930—Capt. Roy W. Ammel of Chicago, flying a Lockheed Sirius *Blue Flash* P & W Wasp, began the first solo non-stop flight from New York to Panama

Canal Zone. On the trip, Ammel flew 2,700 miles in 24 hours 35 minutes.

1935—U. S. Navy made the first mass sea-plane flight from Honolulu to French Frigate Shoals, flying 759 miles non-stop in 6 hours 10 minutes.

November 10

1918—The last patrol of American Air Service over enemy lines was made by the 3d Pursuit Group.

1918—Dr. Robert H. Goddard fired several rocket devices (including an intermittent-firing, long-range rocket; and a projectile (bazooka-type) rocket) before representatives of the Signal Corps, Air Service, Army Ordnance, and others at Aberdeen Proving Ground, Md.

1925—Maj. Thomas G. Lanphier, Air Service, flew from Selfridge Field, Mich., to New York City, 550 miles, in 3 hours 20 minutes.

1944—36 B-25's of the Fifth Air Force attacked a Japanese convoy near Ormoc Bay and sank 3 ships.

1948—The first symposium on Space Medicine was held at the School of Aviation Medicine.

1952—At Santa Susana, Calif., a complete liquid-rocket engine assembly (Navaho) having a thrust in excess of 100,000 lbs. was fired for the first time.

November 11

1935—A 72,394.795-foot world altitude record for balloons was made by Cpts. A. W. Stevens and O. A. Anderson, Rapid City, S. Dak., in cooperation with National Geographic Society. The Hubbard Gold Medal was later awarded.

1943—The Fifth and Thirteenth Air Forces made their first joint attack on Rabaul in cooperation with Naval carrier planes.

1956—The USAF's first supersonic bomber, the Convair B-58 delta-winged Hustler, capable of flying at a speed of 1,000

mph, made its initial flight at Fort Worth, Tex.

1957—Gen. Curtis LeMay, USAF, flew a KC-135 tanker 6,350 miles from Westover AFB, Mass., to Buenos Aires in 13 hours 2 minutes, a world record for nonstop, nonrefueling jet flight. On the return trip he set another record of 11 hours 5 minutes 8 seconds for the 5,204 miles between Buenos Aires to Washington, D. C.

November 12

1909—Wanamaker's Department Store, Philadelphia, advertised "Flying Machines for Sale." The advertisement was in connection with exhibit of "The Bleriot Plane," (an exact duplicate of the one that flew the Channel), which was offered for \$5,000.

1912—The second, and successful, catapult launching made by Lt. T. G. Ellyson in a Curtiss seaplane from a float in the Washington Navy Yard.

1921—The first "air-to-air" refueling was made by Wesley May, with a five-gallon can of gasoline strapped to his back. He transferred from the wing of a Lincoln Standard, flown by Frank Hawks, to the wing skid of a JN4, flown by Earl S. Dougherty, climbed to the engine, and poured the gasoline into the tank.

1941—First launching of an experimental GB-8 glide bomb, incorporating radio controls.

1942—The Ninth Air Force was established in the Middle East.

1942—Last of the 77 P-40's of the 33d Fighter Group were catapulted from the carrier *Chenango*. They landed at Port Lyautey (Morocco) airfield. The operation had started on 10 November.

1950—Pan American World Airways completed round-the-world radio-telephone communications system: 19,687 miles voice radio link, with 32 HF radio ground stations located across 16 islands and continents.

1956—A helicopter speed record of 162.7 mph was established by a Marine Corps twin-engine aircraft, the Sikorsky S-56 at Stratford, Conn.

November 13

1943—Allied planes carried out their heaviest raid on a New Guinea target when 57 B-24's and 62 B-25's bombed Alexishafen and Madang airdromes.

1946—First artificial snow from a natural cloud was produced by Vincent Joseph Schaefer of General Electric Corporation. The experiment was carried out by means of dry-ice pellets dropped from a plane over Greylock Mountain, Mass.

November 14

1910—The first take-off from a Navy ship was made by Eugene Ely from a platform built on the deck of the USS *Birmingham*, anchored at Hampton Roads, Va.

1918—Brig. Gen. William Mitchell was appointed Chief of Air Service, Third Army.

1932—Roscoe Turner, in a Wedell-Williams, set new transcontinental east-west record flight from Floyd Bennett Field, N. Y., to Burbank, Calif., in 12 hours 33 minutes. (Stopped twice en route.)

1943—First AAF attack on Bulgaria was carried out by 90 B-25's of the Twelfth Air Force, which dropped 135 tons of bombs on Sofia.

November 15

1921—Initial flight of airship *Roma* was made at Langley Field, Va.

1942—Lts. Harold Comstock and Roger Dyar set a new speed record for air-planes when they power-dived their P-47 fighters at 725 mph from 35,000 feet over an east coast air base.

1947—The Air Force disclosed that the world's first ram-jet helicopter, the McDonnell "Flying Bike," had been successfully test-flown for six months.

1949—Ryan Aeronautical Company released data on first air-to-air target-seeking guided missile, the XAAM-A-1 Firebird, a 10-foot, rocket-powered projectile.

November 16

1913—John Domenjoz, Swiss aviator, looped his Bleriot over the Battery and the Statue of Liberty, presumably the first performance of the loop.

1927—The Navy aircraft carrier *Saratoga* was commissioned.

1944—In the largest air-ground cooperative effort to date over 4,000 Allied planes dropped more than 10,000 tons of bombs in front of the First and Ninth Armies in preparation for a ground attack.

November 17

1934—Mitchell Trophy Race was won by Capt. Fred C. Nelson, Air Corps, at an average speed of 217.832 mph at Selfridge Field, Mich.

1944—Land based American fighters appeared over Manila, Bataan, and Corregidor for the first time since early 1942.

1954—A USAF B-47 Stratojet bomber broke all jet endurance records by shuttling nonstop between England and North Africa for 47 hours 35 minutes, covering approximately 21,000 miles.

1957—Commanded by Brig. Gen. William K. Martin, USAF, six B-52's completed at Plattsburg AFB, New York a 10,425-mile nonstop round-trip flight from the United States (having taken off at Homestead AFB, Fla.) to Argentina.

November 18

1916—First National Guard cross-country formation flight, Mineola, N. Y., to Princeton, N. J., and return, was made by seven JN4's of the 1st Aero Company, New York National Guard, under command of Capt. R. C. Bolling.

1949—Air Force C-74 Globemaster, *The Champ*, landed at Marham, England,

after carrying a record 103 persons from Mobile, Ala., in 23 hours.

1954—The first flight test of an inertial guidance system for actual missile use (Navaho X-10) was conducted at Dominey, Calif.

November 19

1915—First squadron cross-country flight of the Army's Air Service was begun by 6 Curtiss JN3's of the 1st Aero Squadron, from Fort Sill, Okla., to Fort Sam Houston, San Antonio, Tex., 439 miles.

1932—National monument to Wilbur and Orville Wright was dedicated at Kitty Hawk, N. C.

1940—GHQ Air Force was removed from jurisdiction of the Chief of Air Corps and, as an element of the field forces, was placed under the command of the general commanding the field forces.

1952—Capt. J. Slade Nash, flying an F-86D, established a world speed record of 698.505 mph at Salton Sea, Calif.

1957—An ANP (Aircraft, Nuclear Powered) project, an integrated AEC-DOD atomic aircraft project within the AEC, was announced with Maj. Gen. Donald Keirn, USAF, as its head.

November 20

1916—Representative-elect O. D. Bleakley of Franklin, Pa., became the first member of Congress to fly to Washington as a passenger. He flew from Philadelphia in a plane piloted by Sgt. William C. Ocker.

1945—A world nonstop, non-refueling distance record of 8,198 miles was set by a B-29 which flew from Guam to Washington, D. C. in 35 hours 5 minutes.

1953—In a D-558-II which had been launched from a B-29, test pilot Scott Crossfield established a speed record of 1,327 mph at Edwards AFB, Calif.

1956—Gen. Lauris Norstad, USAF, succeeded Gen. Alfred M. Gruenther, USA, as Supreme Allied Commander, Europe.

1956—The first known airplane landing at

the South Pole was made when Comdr. Conrad Shinn and Lt. Comdr. Roy E. Curtis, USN, set down there with a construction party to build a polar-scientific observation station.

November 21

1917—The Navy's robot bomber (a flying bomb) was demonstrated to Army, Navy, and civilian aviation experts at Amityville, N. Y.

1933—Lt. Comdr. Thomas G. W. Settle, USN, and Maj. Chester L. Fordney, USMC, set a balloon altitude record of 61,237 feet over Akron, Ohio.

1957—The Department of Defense announced that an ICBM base, the first of several, would be erected at Francis E. Warren AFB, Wyo.

November 22

1909—The Wright Company was incorporated with a capital stock of \$1,000,000 to manufacture flying machines.

1935—Beginning of first transpacific airmail flight, by Capt. Edwin C. Musick, Pan American Airways, from San Francisco to Honolulu, Midway Island, Wake Island, Guam, and Manila, in *Martin China Clipper*.

1948—The Wright *Kitty Hawk* airplane arrived in Washington, D. C., at the Smithsonian Institution after 20 years in the South Kensington Museum, London.

1949—The Navy announced that its D-558-2 Skyrocket had repeatedly exceeded the speed of sound at Muroc, Calif.

November 23

1935—(23 November-5 December) Lincoln Ellsworth and pilot Herbert Hollich-Kenyon flew approximately 2,100 miles from Dundee Island, Weddell Sea, Antarctica, to 25 miles from Little America, Bay of Wales, Ross Sea.

1947—The XC-99, world's largest land plane, made its first flight, at San Diego, Calif.

November 24

1930—Ruth Nichols took off from Mineola, N. Y., in Lockheed Vega airplane, arrived at Burbank, Calif., 1 December, thus breaking the east-west women's transcontinental record; flying time 16 hours 59 minutes 30 seconds.

1944—First very heavy bomb strike on Tokyo and first bombing mission of XXI Bomber Command against Japanese home islands was flown by 88 B-29's from the Marianas.

1947—The first live Aerobee rocket was fired to a height of 190,000 feet from White Sands Proving Ground, N. Mex.

November 25

1920—First Pulitzer race was won by Lt. C. C. Moseley in a Verville-Packard 600 at Mitchel Field, N. Y., flying a distance of 132 miles at a speed of 156.54 mph.

1943—The first Fourteenth Air Force mission against Formosa was flown from bases in China by B-25's, P-38's, and P-51's.

1956—T/Sgt. Richard J. Patton, USAF, made the first successful polar parachute jump when he bailed out of a C-124 Globemaster from an altitude of 1,500 feet at the South Pole.

November 26

1945—A TWA Lockheed Constellation broke the west-east transatlantic commercial record by flight of 2,000 miles from Gander, Newfoundland, to Rhineanna, Ireland, in 6 hours 45 minutes.

1952—A Northrop B-62 Snark, a turbojet-powered subsonic long-range (5,500 nautical miles) missile was launched for the first time from a zero-length launcher.

1956—Secretary of Defense Wilson issued a memorandum to the Armed Forces Policy Council fixing the areas of jurisdiction of the three U. S. Armed Services in developing missiles of various ranges, and giving the USAF opera-

Nov. 27-30

tional jurisdiction over long-range missiles.

1957—Flying a RF-101 Voodoo jet aircraft, Lt. Gustave B. Klatt, USAF, set a west-east (Los Angeles to New York) transcontinental flight record of 3 hours 5 minutes 39.2 seconds.

1957—In a RF-101 Voodoo jet aircraft Capt. Robert M. Sweet, USAF, established a round-trip transcontinental (Los Angeles to New York) flight record of 6 hours 42 minutes 6.9 seconds. On the return leg he set an east-west record of 3 hours 34 minutes 8.6 seconds.

November 27

1912—Army's first flying boat, Signal Corps No. 15, a Curtiss Model F, with 75 hp., 8-cylinder Curtiss "O" engine, was accepted at the Curtiss factory.

1917—Brig. Gen. B. D. Foulois, Signal Corps, was made Chief of Air Service, American Expeditionary Forces.

1943—XX Bomber Command was activated at Smoky Hill Army Air Field, Salina, Kans.

1954—A Pan American Airways Super-Stratocruiser set a transatlantic speed record for commercial planes when it flew from New York to Paris in 9 hours 42 minutes, averaging 371 mph.

November 28

1908—First trials of the seaplane Loon, on Lake Keuka, Hammondsport, N. Y., by J. A. D. McCurdy. This was the first attempt at a water take-off in America; although the plane did not lift into the air, it ran on the water at 72 mph.

1942—Nine B-24's of the 7th Bombardment Group flew a 2,760-mile round-trip mission from Gaya, India, to bomb Bangkok, in the first USAAF attack on Japanese-held Thailand.

November 29

1929—Comdr. Richard E. Byrd, in a trimotor Ford piloted by Bernt Balchen,

made the first flight over the South Pole.

1943—First American raid was made on Sarajevo, Yugoslavia, historic city of World War I; 25 B-25's of the Twelfth Air Force hit military installations and rail facilities.

1949—Navy HRP-2 tandem-rotored helicopter, able to carry 16 passengers, was displayed by Piasecki Helicopter Company.

1951—Announcement of USAF's first all-jet heavy bomber, the 8-jet XB-52.

1954—In a flight from Los Angeles to New York an American Airlines DC-7 set a transcontinental speed record of 5 hours 34 minutes.

1957—In a speech at the National Press Club, General White made the first official disclosure that the Air Force was "working on" an anti-missile missile called the Wizard.

1957—Chief of Staff General Thomas D. White announced that the ICBM and IRBM missile programs had been assigned to SAC. He also announced that the 1st Missile Division was being transferred to SAC (effective January 1, 1958), and that the San Bernardino AF Depot would be converted to support the long-range ballistic missile program.

November 30

1905—During the month the Aero Club of America was formed by men who had earlier organized the Automobile Club of America.

1907—The first airplane company in the United States was formed during the month—the Curtiss Motor Vehicle Company.

1913—First known aerial combat, between Phil Rader, flying for General Huerta and Dean Ivan Lamb, with Carranza, over Naco, Mexico. (Exact date unknown, though probably in late November or early December 1913; details unknown, except that a dozen or so pistol shots were exchanged.)

1948—Curtiss-Wright demonstrated its new reversible pitch propellers which enabled a C-54 to make a controlled descent from 15,000 to 1,000 feet in 1 minute 22 seconds.

1956—The Martin TM-61 Matador, a jet-propelled missile, completed its final test flight and became the USAF's "first completely tactical missile."

DECEMBER

December 1

1921—Initial flight of first airship using helium gas as substitute for hydrogen—the USN dirigible C-7. The flight was from Hampton Roads, Va., to Washington, D. C., and return.

1935—Mass flight of 29 bombardment planes of 7th Bombardment Group started from Hamilton Field, Calif. The planes reached Vero Beach, Fla., in 21 hours 50 minutes.

1941—An Executive Order established the Civil Air Patrol.

1943—Igor Sikorsky received the Worcester Reed Warner Medal for creative engineering, especially in aeronautics.

1948—The Continental Air Command was activated.

1949—The Navy supersonic wind tunnel, capable of 3,000 mph speeds, was dedicated at MIT.

December 2

1941—First world flight by a commercial airplane was made by *Pacific Clipper* of Pan American Airways. It left San Francisco 2 December and landed in New York City 6 January 1942, having covered 31,500 miles in 209 hours 30 minutes, flying time.

1943—U. S. Navy announced acceptance for the Naval Transport Service of the world's largest flying boat, the 70-ton *Martin Mars*.

December 3

1937—Maj. A. P. de Seversky flew from New York City to Havana, Cuba, set-

ting a new record of 5 hours 2 minutes 51 seconds.

1945—The 412th Fighter Group, first USAAF jet fighter unit, received its first P-80 aircraft at March Field, Calif.

1956—The USS *Gyatt*, the world's first known guided-missile-launching destroyer was commissioned in Boston. (Principal weapon for the new vessel with a Terrier missile.)

1957—Led by Col. Archie Blood, USAF, 16 F-100D Supersabres flew from Tokyo to Honolulu—3,850 miles—in 6 hours 21 minutes, an unofficial record for that flight.

December 4

1913—The first organization for an aero squadron was set forth in G. O. No. 75.

1918—Start of first Army transcontinental flight by four Curtiss JN4's, under Maj. Albert D. Smith, from San Diego to Jacksonville, which was reached on 22 December.

1945—TWA Lockheed Constellation set a commercial record of 12 hours 57 minutes in its first flight from Washington to Paris.

1957—The USAF announced Bomarc launching sites would be constructed at 4 named AF installations (Dow, Otis, Suffolk, and McGuire).

December 5

1907—Wilbur Wright appeared before the Board of Ordnance and Fortification and offered the U. S. Government an airplane, capable of carrying two people, for \$25,000. The Board recommended that the Signal Corps submit to it specifications for an airplane.

1911—Bell aileron patent was issued to the Aerial Experiment Association (Alexander Graham Bell and others). The patent was later purchased by Glenn Curtiss.

1929—Admiral Richard E. Byrd made a 400-mile aerial mapping flight along the coast of Antarctica.

Dec. 6-10

1949—The USAF diverted \$50 million from other projects to begin construction of a radar screen in Alaska and certain U. S. areas as a result of detection of a Soviet atomic explosion in August 1949.

December 6

1907—Alexander Graham Bell's kite, *Cygnét I*, flown by Lt. T. E. Selfridge and towed by a motorboat tug, stayed aloft for 7 minutes over Bras d'Or Lake, Nova Scotia.

1944—Roy W. Howard, president of the Scripps-Howard newspapers, received the Frank M. Hawks Memorial Award in New York, from Air Service Post 501 of the American Legion, for outstanding aid and cooperation in the development of aviation.

1954—The Curtiss-Wright Corp. revealed the existence of what was believed to be the first rocket engine with throttle control. The control makes possible extended flight range in supersonic airplanes.

December 7

1926—An airway beacon was erected by the Aeronautics Branch, Department of Commerce, on the Chicago-Dallas route.

1941—The Japanese bombed Pearl Harbor.

1954—At Edwards AFB, Calif., the USAF made the first successful recovery of a missile (Navaho X-10) using a fully automatic approach and landing system.

December 8

1903—The second and last trial of the Langley airplane. The machine, piloted by Charles M. Manly, was wrecked in launching from a houseboat on the Potomac River.

1914—Lawrence B. Sperry demonstrated the Sperry Gyroscopic stabilizer to a committee of the Aero Club of America; subsequently he was awarded the Collier Trophy.

1948—A 6-engine B-36 completed a 9,400

mile nonstop flight from Fort Worth to Hawaii and back without refueling.

December 9

1930—Ruth Nichols began flight from Los Angeles to New York which set new women's one-stop transcontinental speed record of 13 hours 22 minutes flying time.

1945—First stratovision flight test made at Middle River, Md., by Westinghouse Electric Corporation and Glenn L. S. Martin Company. Telecasts were made from the airplane flying in the stratosphere. William Smith was the test pilot.

1946—AAF revealed first powered test-flight of XS-1. Plane, flown by Chalmers Goodlin, a Bell test pilot, reached a speed of 550 mph.

1955—Responsibility for the development of the Thor IRBM was assigned to the Air Force Ballistic Missile Division.

December 10

1943—Secretary of the Navy, Frank Knox, disclosed that the flying boat *Mars*, recently delivered, had flown 8,972 miles on a round trip from the United States to Natal, Brazil. It set records for weight of cargo (35,000 pounds) and for the longest overwater trip—4,375 miles from Patuxent, Md., to Natal.

1947—The National Aeronautic Association awarded Lewis A. Rodert the Robert J. Collier Trophy for 1946, for developing thermal ice-prevention systems.

1947—At Edwards AFB, Calif., Lt. Col. John P. Stapp, USAF(MC), made his first rocket-propelled sled ride.

1954—On a rocket-propelled sled run Col. John P. Stapp, USAF(MC), attained a speed of 632 mph and sustained the greatest G-force ever endured by man in recorded deceleration tests—the equivalent of Mach 1.7 at 35,000 feet.

1957—The USAF Deputy Chief of Staff for Development announced the establishment of a Directorate of Astronautics.

December 11

1914—For the first time radio messages were received in an Army airplane at a distance of 10 miles. The experiment was conducted in the Philippines in a Burgess-Wright plane by Lt. H. A. Dargue, pilot, and Lt. J. O. Mauborgne, designer of the radio set.

1915—The first foreign officers to become flying students in a U. S. Army school—four Portuguese Army officers—reported to the Signal Corps Aviation School at San Diego, Calif.

1935—The Hubbard Gold Medal of the National Geographic Society was presented to Capt. Albert W. Stevens and Capt. Orvil A. Anderson for their stratosphere balloon ascent of 11 November 1935.

1945—B-29 *Dreamboat*, piloted by Col. Clarence S. Irvine, averaged 450 mph in setting a new record of 5 hours 27 minutes 8 seconds for a 2,464-mile flight from Burbank, Calif., to New York.

December 12

1929—Langley medals were presented to Admiral Richard E. Byrd for his flights over the Poles, and to Charles M. Manly for his pioneer development of airplane engines.

1935—Lt. Hugh F. McCaffery, U. S. Army, and crew of 5 set amphibian distance record of 1,033.2 miles from San Juan, Puerto Rico, to Chapman Field, Miami, Fla.

1941—Maj. Gen. H. A. Dargue, pioneer flier, was killed when the plane in which he was riding struck the side of a mountain in the Sierra Nevadas near Bishop, Calif.

1953—In a Bell X-1A which had been launched from a B-36 bomber Maj. Charles E. Yeager, USAF, attained a speed of 1650 mph, about twice that of sound, at Edwards AFB, Calif.

1957—In a F-101A Voodoo fighter bomber Maj. Adrian E. Drew, USAF, established a world speed record of 1,207.6

mph over a measured course at Edwards AFB, Calif.

December 13

1927—Col. Charles A. Lindbergh began a goodwill flight to Mexico, Central America, and the West Indies.

1933—First Air Mail Flyer's Medal of Honor was presented to Mal Bryan Freeburg by President Franklin D. Roosevelt.

1956—Maj. Arnold I. Beck, USAF, "soared" to a simulated altitude of 198,770 feet, the highest on record, in an Air Research and Development Command altitude chamber at Dayton, Ohio.

December 14

1903—The world's first power airplane flight was made off Kill Devil Hill, Kitty Hawk, N. C., by Wilbur Wright; he flew 105 feet in 3.5 seconds. (Because the plane crashed so soon after take-off, the flight is not considered either as sustained or controlled as are the flights of 17 December.)

1927—Maj. Gen. J. E. Fechet succeeded Maj. Gen. M. M. Patrick as Chief of Air Corps.

1946—American Airlines in Washington announced that it would be the first commercial carrier to use "jato" (jet assisted take-off) on all its contract cargo planes.

December 15

1942—Nine B-24's of the 376th Bombardment Group bombed Sfax in the opening phase of the Ninth Air Force's campaign against Tunisian ports.

1946—National Airlines set a Newark-Havana commercial record of 6 hours 15 minutes.

1957—The 556th Strategic Missile Squadron, the first SM-62 (Snark) operational squadron, was activated at Patrick AFB, Fla.

December 16

- 1907—Chief Signal Officer called for bids on lighter-than-air "airship."
- 1914—Two-way radio telegraphy between the air and the ground was first demonstrated in the Army by Lts. H. A. Dargue and J. O. Mauborgne flying a Burgess-Wright plane in the Philippines.
- 1939—Maj. Gen. Delos C. Emmons was made commander of General Headquarters Air Force at Langley Field, Va.

December 17

- 1903—The first sustained controlled power airplane flights were made by Orville and Wilbur Wright at Kitty Hawk, N. C. On the fourth and longest flight of the day the plane flew 852 feet in 59 seconds.
- 1911—The first aerial reconnaissance motion picture in America was made at Beaumont, Tex., by Cameraman E. R. Shaw from Robert G. Fowler's Wright plane in the course of a flight from Beaumont to New York.
- 1925—General William Mitchell was found guilty of violating the 96th Article of War. He was given a sentence of five years suspension of rank, pay, and command; Mitchell then resigned from the Army.
- 1943—Orville Wright presented the Collier Trophy to his former pupil, Gen. H. H. Arnold, CG, AAF, for outstanding achievement in aviation in 1943.
- 1944—Maj. Richard Bong shot down his 40th enemy plane in the Pacific.
- 1945—President Truman presented the 1945 Collier Trophy to Gen. Carl A. Spaatz for "demonstrating the air power concept" in the European war.
- 1946—A space biological research program was initiated at Holloman AFB, N. Mex., by the National Institute of Health.
- 1947—The prototype B-47 jet bomber flew for the first time at Seattle.

- 1948—Celebration of the return to the United States of the Wright Kitty Hawk plane, which had been in a British museum for 20 years, was held at the Smithsonian Institution on the 45th anniversary of the flight.
- 1957—In the first successful USAF firing of its Atlas ICBM, the missile landed in the target area after a flight of some 500 miles.

December 18

- 1908—Wilbur Wright won the Aero Club de la Sarthe 100-meter height prize by an official flight to a height of 110 meters. He also established a world's duration distance record of 99.8 kilometers in 1 hour 54 minutes 53.4 seconds.
- 1923—The Christmas aileron patent claim was settled by the U. S. Government, which bought the patent rights for \$100,000.
- 1941—Lt. "Buzz" Wagner, USAAF, became the first ace of World War II by shooting down his fifth Japanese plane over the Philippines.

December 19

- 1912—President Taft appointed a commission to report to Congress on a national aerodynamic laboratory, but the bill to legalize the commission was not passed by Congress.
- 1928—The first autogiro flight in the United States was made by Harold F. Pitcairn, Pitcairn Field, Willow Grove, Pa.
- 1936—Maj. Alexander P. de Seversky set an international amphibian speed record for 100 kilometers at Miami, Fla., by traveling 209.451 mph.
- 1957—A Thor missile, the eighth tested and the fourth successfully, completed the first fully-guided IRBM flight using an all-inertial guidance system.

December 20

- 1916—U. S. Army Balloon School was established at Ft. Omaha, Nebr.
- 1928—The first long airplane flight over the

Antarctic, 0 hours in the air, was made by Capt. Sir Hubert Wilkins and Lt. Carl Ben Eielson, of a British expedition.

1934—Lt. Comdr. E. F. Stone, U. S. Coast Guard, set an international amphibian speed record of 191.734 mph at Hampton Roads, Va.

948—XB-47 Stratojet averaged 500 mph for 1,000-mile flight from Moses Lake, Wash., to Albuquerque, N. Mex.

December 21

1926—Pan American good will flight of 22,065 miles from San Antonio, Texas, around South America to Washington, D. C., with Maj. H. A. Dargue commanding; Loening amphibians with Liberty 400 engines. The Mackay Trophy and DFC were awarded.

1944—Gen. H. H. Arnold became General of the Army, the first airman to hold this rank.

1948—The Navy announced development of stall-proof automatic pilot capable of landing planes by radar in the "most unfavorable" weather.

December 22

1931—Maj. Gen. B. D. Foulois took oath as Chief of Air Corps.

1942—The first full-scale air attack on an enemy base in the Central Pacific was made by 26 B-24's of the 307th Bombardment Group, which staged through Midway to bomb Wake.

1946—NACA announced development of the *Tiamat*, a winged rocket missile with speed in excess of 600 mph. Flown at Langley Field, Va., it was the first guided missile to be flown successfully through a predetermined program of maneuvers.

December 23

1907—Bids on a heavier-than-air "flying machine" were called for by Chief Signal Officer.

1914—The Mackay Trophy for reconnaissance competition was won by Capt. T. F. Dodd and Lt. S. W. Fitzgerald.

1918—Maj. Gen. C. T. Menoher was appointed Director of Air Service. He assumed his duties on 2 January 1919.

December 24

1935—Brig. Gen. Oscar Westover was appointed Chief of Air Corps with rank of Major General.

1943—The first major Eighth Air Force assault on German V-weapon sites was made when 670 B-17's and B-24's bombed the Pas de Calais area.

December 25

1949—Air Force revealed development of stupalith, a ceramic which contracts when heated and expands when cooled, and which can stand heat of 2,000 degrees—to be used on jet and rocket engines.

December 26

1913—Army altitude record of 7,800 feet for pilot and passenger was established by Lt. J. C. Carberry and his passenger, Lt. W. R. Taliaferro, in a Curtiss tractor (S. C. No. 22) at San Diego, Calif.

1943—Pre-invasion bombing of Cape Gloucester (New Britain) completely destroyed enemy defenses; Fifth Air Force adopted the term "Gloucestrizing" to describe complete destruction of a target.

December 27

1935—Aerial bombardment diverted the Mauna Loa lava flow from waterworks at Hilo, Hawaii.

December 28

1942—Capt. Robert Daniel Sullivan, first aviator to fly 100 times across the Atlantic Ocean, completed his 100th trip, flying from New York to Portugal. His

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first was 28-29 January 1938, New York to Marseilles, France.

1957—Capt. James E. Bowman, USA, set a 30,335-foot world altitude record for helicopters in a Cessna YH41 Seneca at Wichita, Kans.

December 29

1913—Lts. J. E. Carberry and Fred Seydel won the second Mackay Trophy contest for reconnaissance at San Diego, Calif.

1921—World endurance record of 26 hours 18 minutes 35 seconds was set at Roosevelt Field, New York, by Edward Stinson and Lloyd Bertaud in a Larsen Junker-BMW 185.

1942—Collier Trophy was given jointly to the AAF and the private air lines of the nation.

1948—Defense Secretary Forrestal announced that the United States is working on an "earth satellite vehicle program," a project to study the operation of guided rockets beyond the earth's pull of gravity.

1949—Jacqueline Cochran set a new international speed record of 436.995 mph for 500 kilometers (310.685 miles) without payload in an F-51 at Desert Center, Mt. Wilson course.

December 30

1914—The first Burgess-Dunne inherently stable armored airplane, Signal Corps No. 36, was accepted by the Signal Corps.

1945—Republic Aviation Corporation revealed development of XF-12, a 4-engine flying photo laboratory, for the Air Technical Service Command.

December 31

1908—Wilbur Wright flew 124.7 kilometers (77 miles) in 2 hours 20 minutes and 23.2 seconds, to establish a world duration-distance record at Le Mans, France, winning the Michelin Trophy and \$4,000.

1913—Orville Wright demonstrated his automatic stabilizer at Dayton, Ohio, for which he was awarded the Collier Trophy for 1913.

1934—Helen Richey, first woman aviator to pilot airmail transport on regular schedule, flew from Washington, D. C., to Detroit, Mich., in a tri-motored Ford 12 passenger transport. She was appointed co-pilot by Central Airlines, Inc.

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